IB70 Motherboard

Mini-ITX Fanless SBC with Bay Trail Intel ® Celeron Processor, LVDS, VGA, Dual Giga Ethernet, and Mini-PCIe Interface

User Manual / Engineering Spec.

Version 1.3

FCC Statement

This device complies with part 15 FCC rules. Operation is subject to the following two conditions：
This device may not cause harmful interference.
This device must accept any interference received including interference that may cause undesired operation.
This equipment has been tested and found to comply with the limits for a class "a" digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at him own expense.

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Warranty

We warrant that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, We will, at its option, repair or replace the defective product at no charge to the customer, provided it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in its original packaging to obtain warranty service.

If the serial number and the product shipping data differ by over 30 days, the in-warranty service will be made according to the shipping date. In the serial numbers the third and fourth two digits give the year of manufacture, and the fifth digit means the month (e. g., with A for October, B for November and C for December).

For example, the serial number 1W11Axxxxxxxx means October of year 2011.

Packing List

Before using this Motherboard, please make sure that all the items listed below are present in your package：
IB70 Motherboard
HDD SATA Cable
User's Manual & Driver CD

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

Customer Service

We provide service guide for any problem as follow steps： The first, contact with your distributor, sales representative, or our customer service center for technical support if you need additional assistance. You may have the following information ready before you call：

Product serial number

Peripheral attachments

Software (OS, version, application software, etc.)

Description of complete problem

The exact wording of any error messages

In addition, free technical support is available from our engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products. Please do not hesitate to call or e-mail us.

Safety Precautions

Warning!

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronic personnel should open the PC chassis.

Caution!

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

Safety and Warranty

Please read these safety instructions carefully.
Please keep this user's manual for later reference.
Please disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
Keep this equipment away from humidity.
Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENING.
Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
Position the power cord so that people cannot step on it. Do not place anything over the power cord.
All cautions and warnings on the equipment should be noted.
If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
Never pour any liquid into an opening. This could cause fire or electrical shock.
Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.
If any of the following situations arises, get the equipment checked by service personnel:
The power cord or plug is damaged.
Liquid has penetrated into the equipment.
The equipment has been exposed to moisture.
The equipment does not work well, or you cannot get it to work according to the user’s manual.
The equipment has been dropped and damaged.
The equipment has obvious signs of breakage.
Do not leave this equipment in an uncontrolled environment where the storage temperature is below -20° C (-4°F) or above 60° C (140° F). It may damage the equipment.

Revision History

Version	Date	Note	Author
1.0	2014.07.04	Initial Draft	Jimmy Chen
1.1	2014.08.15	Block Diagram revision	Jimmy Chen
1.2	2014.09.01	Add OS Selection	Jimmy Chen
1.3	2015.05.08	Add USB 3.0 Driver Installation	Jimmy Chen

Contents

CHAPTER 1: GENERAL INFORMATION 2

1.1 INTRODUCTION 2
1.2 FEATURES 2
1.3 MOTHERBOARD SPECIFICATIONS 3
1.4 FUNCTION BLOCK 4
1.5 BOARD DIMENSIONS 5

CHAPTER 2: INSTALLATIONS 7

2.1 MEMORY MODULE (SO-DIMM) INSTALLATION 7
2.2 I/O EQUIPMENT INSTALLATION 8
2.3 JUMPERS AND CONNECTORS 9
2.4 JUMPER SETTING 10
2.5 CONNECTORS AND PIN ASSIGNMENT 14

CHAPTER 3: CHIPSET DRIVER INSTALLATION 23

3.1 STANDARD CMOS FEATURES 23

CHAPTER 4: GRAPHIC DRIVER INSTALLATION 27

4.1 STANDARD CMOS FEATURE ..... 錯誤! 尚未定義書籤。
4.2 PANEL RESOLUTION SETTING 31

CHAPTER 5: ETHERNET DRIVER INSTALLATION 34

5.1 INSTALLATION OF ETHERNET DRIVER 34

CHAPTER 6: AUDIO DRIVER INSTALLATION 38

6.1 INTRODUCTION 38
6.2 INSTALLATION OF AUDIO DRIVER 38

CHAPTER 7: USB 3.0 INSTALLATION 41

7.1 INSTALLATION 41

CHAPTER 8: FINTEK COM PORT DRIVER INSTALLATION .. 46

CHAPTER 9: AMI BIOS SETUP 50

9.1 HOW AND WHEN TO USE BIOS SETUP 50
9.2 BIOS FUNCTIONS 51
9.3 USING RECOVERY WIZARD TO RESTORE COMPUTER 58

CHAPTER 10: APPENDIX 62

10.1 NOTE1: DIGITAL I/O SAMPLE CODE 62
10.2 NOTE2: WATCHDOG SAMPLE CODE 62

CHAPTER 1

General Information

This chapter includes the IB70 Motherboard background information. Sections include:

- Introduction
- Feature
- Motherboard Specification
- Function Block
- Board Dimensions

Chapter 1: General Information

1.1 Introduction

The IB70 SBC is integrated with Bay Trail Intel® Celeron N2930 which offers a high performance computing platform with low power consumption. The new motherboard supports 204-pin SO-DIMM DDR3L at speeds of 1066/1333 MHz, up to 8GB.

One SATAII interface provides ample capacity. With dual Gigabit Ethernet, four COM ports, one USB 3.0 and five USB 2.0, IB70 SBC meets the requirements of today's various applications.

Display requirements are met with rich interfaces, such as eDP, LVDS, and CRT. The graphic engine adopts Intel® SoC Integrated offer high definition display function, and it also supports 24-bit Dual-Channel LVDS.

With all of the integrated features, IB70 SBC is designed to satisfy most of the applications in the industrial computer market, such as Gaming, POS, KIOSK, Industrial Automation, and Programmable Control System. It is a compact design to meet the demanding performance requirements of today's business and industrial applications.

1.2 Features

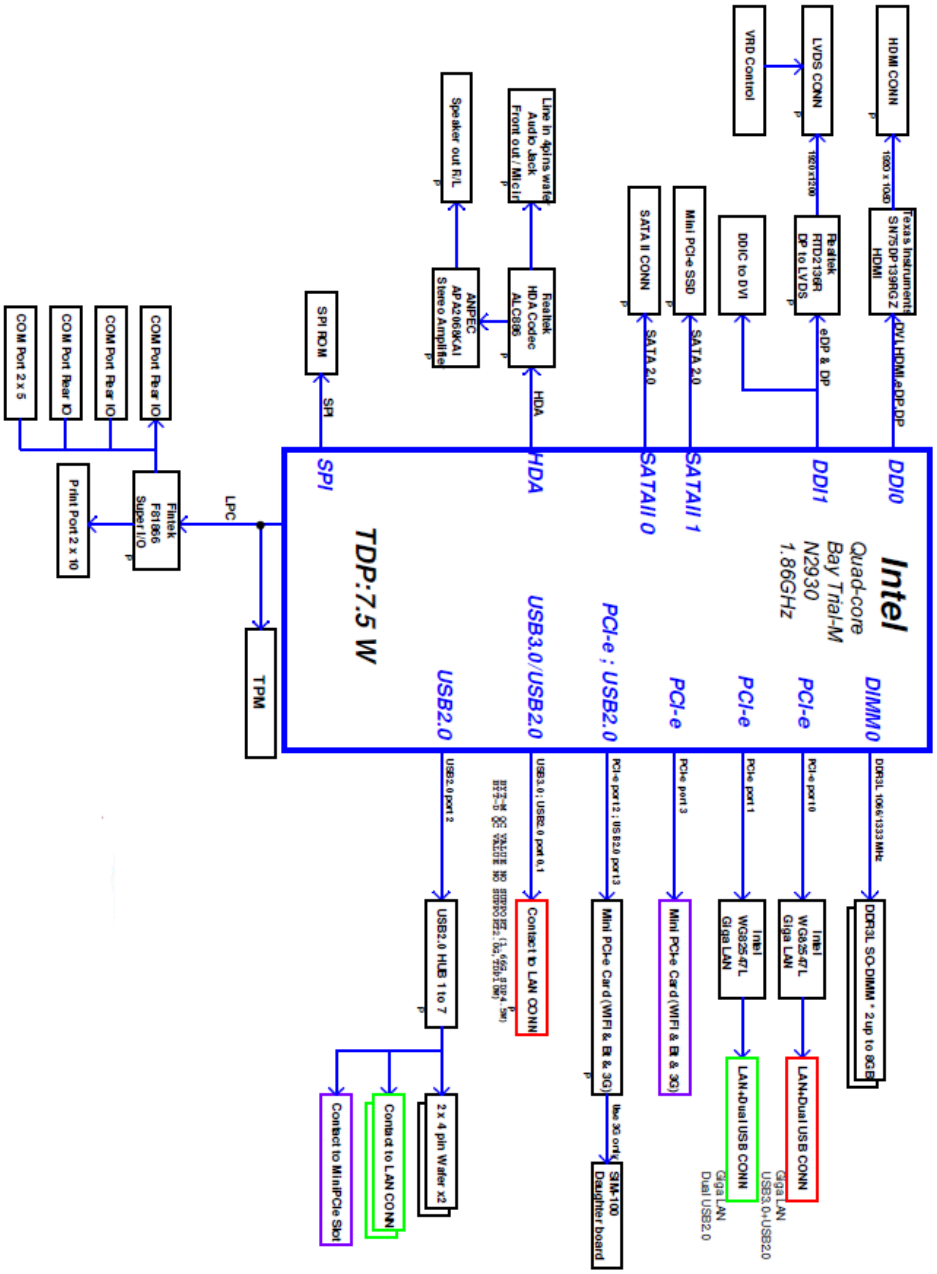
- Mini-ITX Form Factor (170mm x 170mm)
- Supports Bay Trail Intel® Celeron N2930 1.83GHz processor
- System memory up to 8GB DDR3L 1066, SO-DIMM
- Intel® SoC Integrated
- Intel® HD Graphics Engine
- VGA, 18/24-bit Dual-Channel LVDS, eDP 1.3
- 2 x Intel® WG82574L GbE
- 3 x Mini PCIe (two for wireless, one for mSATA SSD), 4 x COM, 1 x USB 3.0, 7 x USB 2.0, 2 x SATA II, 12-bit GPIO
- DC 12V IN

1.3 Motherboard Specifications

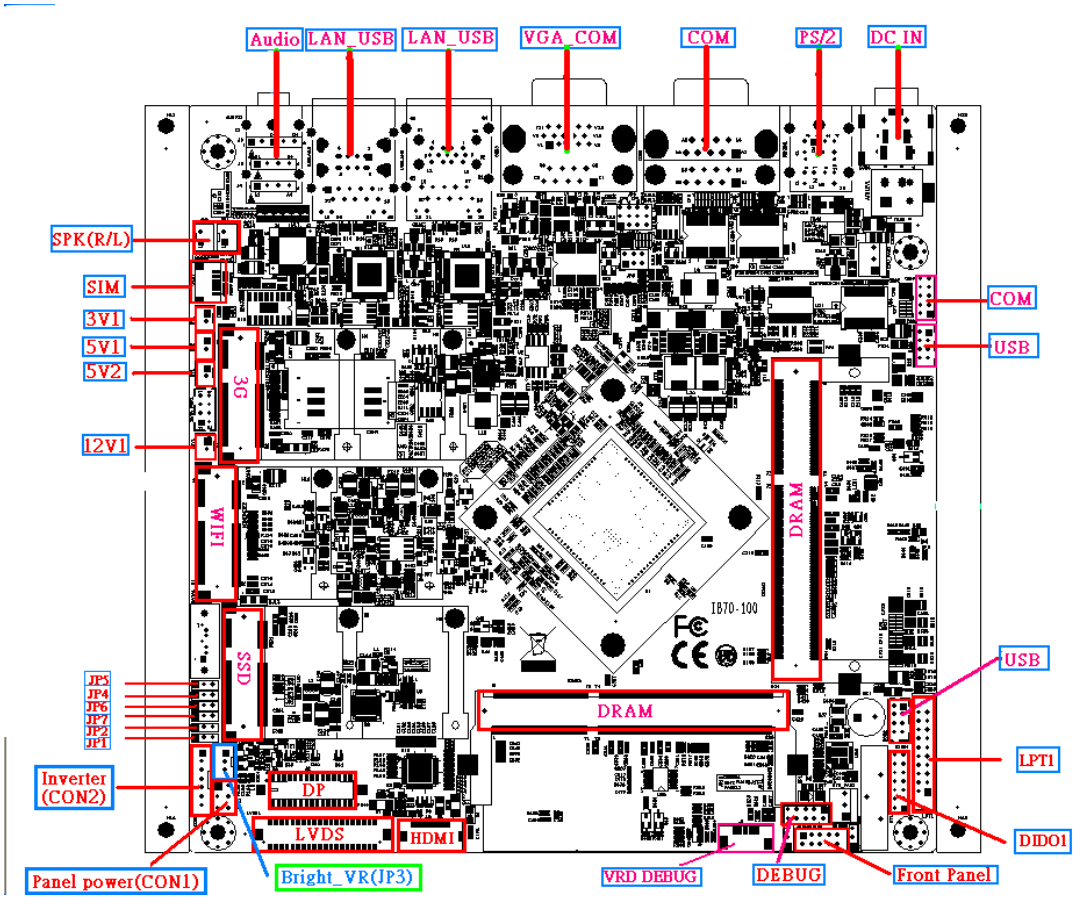
CPU Type	Intel® Celeron® Bay Trail-M N2930
CPU Speed	1.83GHz
Chipset	Intel® SoC Integrated
BIOS	AMI 64Mbit Flash
Graphic	Intel® Graphics Engine
LCD interface	Dual-Channel 18/24 bit LVDS Up to 1920 x 1080 @ 60Hz
Resolution	VGA mode： Up to 1920 x 1200 @ 60Hz DVI： 1920 x 1200 @ 60Hz
LAN	2 x Giga LAN (Intel WG82574L GbE)
Memory Type	2 x SO-DIMM socket, supports up to 8GB DDR3 1066/1333
Super I/O	Fintek F81866
Sound	Realtek ALC886 HD Audio Codec
USB	8 ports, 1 x USB 3.0, 7 x USB 2.0 (4 x USB 2.0 pin-header)
Edge Connectors	1 x DC-IN Jack (+12V) 1 x VGA out connector 2 x Gigabit LAN RJ-45 1 x RS232/422/485 2 x RS232 4 x USB connector (1 x USB 3.0, 2 x USB 2.0) 2 x PS2 1 x Audio Jack(Line in, Line out, Mic in)
On Board Pin-Header Connectors	2 x SATA connector for SATAI/II 3.0 Gb/s 1 x 10 pins pin-header for Front Panel(2x5) 1 x 8 pins pin-header for 5V/12V external power 1 x 3 pins pin-header for CPU Fan 1 x 3 pins pin-header for System Fan 2 x 2 pins pin-header for 5V external power 1 x 2 pins pin-header for 12V external power 2 x 8 pins pin-header for USB (2X4) 1 x 10 pins Digital I/O(2x5) 1 x 10 pins pin-header for COM2 (2X5) 1 x 4-pin Power-input connector 1 x 20 pins Connector for LVDS 1 x 30 pins Connector for eDP 1 x 3 pins digital panel backlight brightness controller 1 x 7 pins digital panel inverter 2 x 2 pins pin-header for Speaker 1 x 20 pins pin-header for LPT port(2X10)
Power Connector	Input: 4-pin Power-input connector
Expansion Slots	2 x Mini PCIe slot
Form Factor	Mini-ITX

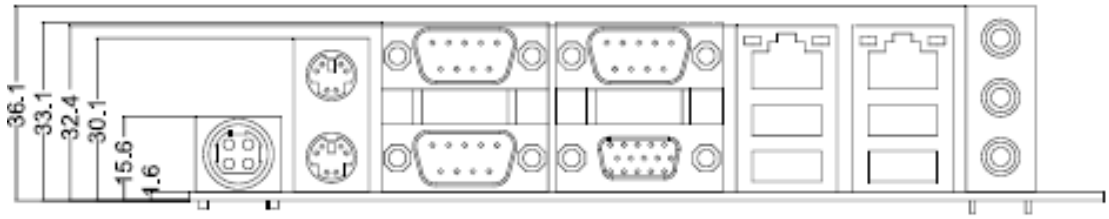
Dimensions	170mm x 170mm
Mechanical & environmental	Operating temperature: 0 deg. C to 60 deg. C Operating Humidity: 10 ~ 90% Relative humidity, non-condensing Shock: Operating 15G, 11ms duration Vibration: Operating 5 Hz~500Hz / 1Grms / 3 Axis Certification: CE, FCC, RoHS

1.4 Function Block



1.5 Board dimensions





CHAPTER 2

Installations

This chapter provides information on how to use the jumps and connectors on the IB70 Motherboard.
Sections include:

- Memory Module Installation
- I / O Equipment Installation
- Setting the Jumpers
- Jumper Setting
- Connectors and Pin Assignment

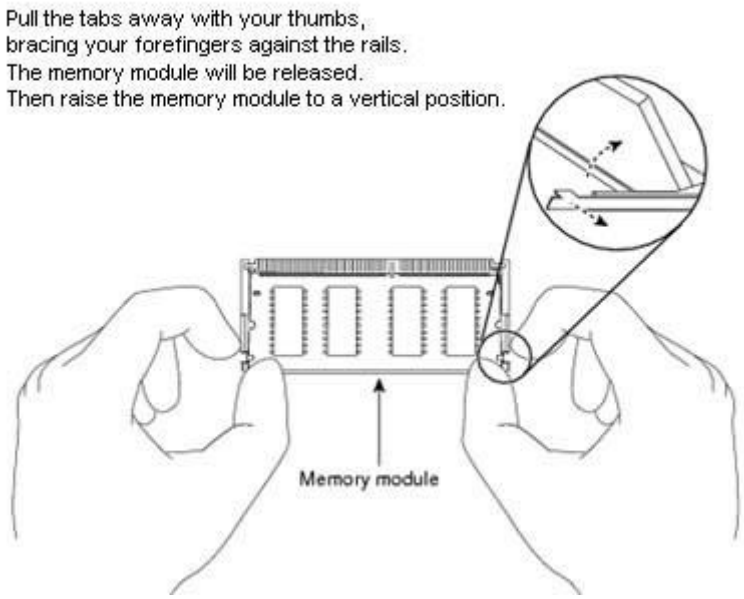
Chapter 2: Installations

2.1 Memory Module Installation

The IB70 Motherboard provides one 204-pin SODIMM slot. The socket supports up to 4GB DDR3L 1066/1333 SDRAM. When installing the Memory device, please follow the steps below：

Step.1. Firmly insert the SO-DIMM at an angle into its slot. Align the SO-DIMM on the slot such that the notch on the SO-DIMM matches the break on the slot.

Step.2. Press downwards on SO-DIMM until the retaining clips at both ends fully snap back in place and the SO-DIMM is properly seated.


Pull the tabs away with your thumbs,
bracing your forefingers against the rails.
The memory module will be released.
Then raise the memory module to a vertical position.
Memory module

Caution!

The SO-DIMM only fits in one correct orientation. It will cause permanent damage to the development board and the SO-DIMM if the SO-DIMM is forced into the slot at the incorrect orientation.

2.2 I/O Equipment Installation

2.2.1 12V DC-IN

***Without power/reset OSD, short circuit pin 5 and 6 together to boot up the motherboard.**

The Motherboard allows plugging 12V DC-IN jack on the board without another power module converter under power consumption by Intel® Celeron N2930 1.83GHz Processor with Intel SoC integrated

2.2.2 Serial COM ports

Three RS-232 connectors build in the rear I/O. One optional COM ports support RS-422/485. When an optional touch-screen is ordered with PPC, serial com port can connect to a serial or an optional touch-screen.

2.2.3 External VGA

The Motherboard has one VGA port that can be connected to an external CRT/ LCD monitor. Use VGA cable to connect to an external CRT / LCD monitor, and connect the power cable to the outlet. The VGA connector is a standard 15-pin D-SUB connector.

2.2.4 Ethernet interface

The Motherboard is equipped with Intel WG82574L chipset which is fully compliant with the PCI 10/100/1000 Mbps Ethernet protocol compatible. It is supported by major network operating systems. The Ethernet ports provide two standard RJ-45 jacks.

2.2.5 USB ports

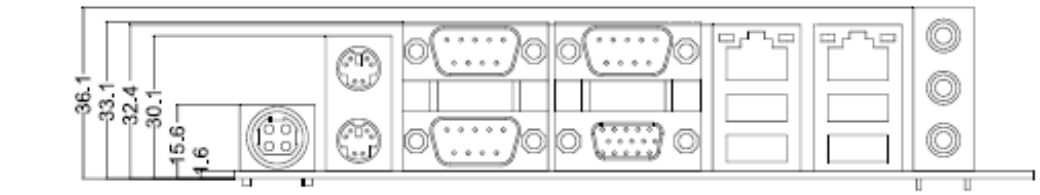
Eight USB devices (One USB3.0, four with pin headers) may be connected to the system though an adapter cable. Various adapters may come with USB ports. USB usually connect the external system to the system. The USB ports support hot plug-in connection. Whatever, you should install the device driver before you use the device.

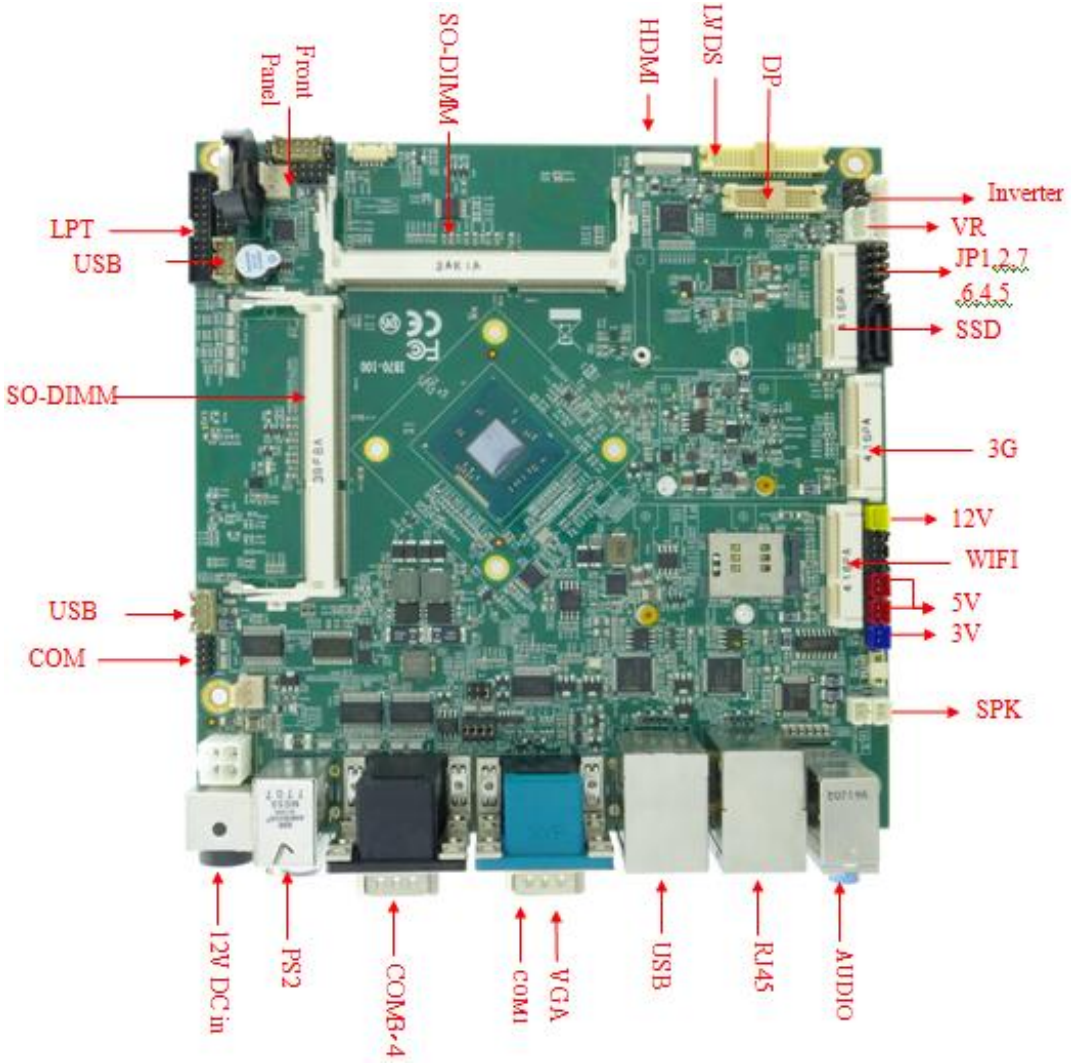
2.2.6 Audio function

The Audio 7.1 channel capabilities are provided by a Realtek ALC886 chipset supporting digital audio outputs. The audio interface includes three jacks: line-in, line-out and mic in.

2.3 Setting the Jumpers

TOP

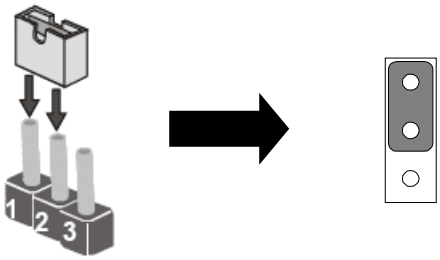




2.4 Jumper Setting

A pair of needle-nose pliers may be helpful when working with jumpers. If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes. Generally, you simply need a standard cable to make most connections.

The jumper setting diagram is as below. If a jumper shorts pin 1 and pin 2, the setting diagram is shown as the right one.



2.4.1 Jumper Lists

The following tables list the function of each of the board's jumpers.

Label	Function	Note
JP1	Inverter Voltage Select	3x1 header, pitch 2.0mm
JP2	Inverter Enable Select	3x1 header, pitch 2.0mm
JP4	DC Mode Control (For VR)	3x1 header, pitch 2.0mm
JP5	For SoC Brightness PWM Voltage Select	3x1 header, pitch 2.0mm
JP6	Brightness Control Select	3x1 header, pitch 2.0mm
JP7	Brightness Control to VRD	3x1 header, pitch 2.0mm
JP8	COM Port Select	2x3 header, pitch 2.0mm
JP9	COM Port Select	3x4 header, pitch 2.0mm
JP10	VRD Brightness Function	3x1 header, pitch 2.0mm
JP11	Clear CMOS Jump	3x1 header, pitch 2.0mm

JP1: Inverter Voltage Select

Location	Header Type	Description	Function
JP1	Header 3*1	Inverter Voltage Select	1-2: 5.0V
			2-3: 12 V

※ Default : 1-2

JP2 : Inverter Enable Select

Location	Header Type	Description	Function
JP2	Header 3*1	Inverter Enable Select	1-2: Control to BLON
			2-3: Normal (Always)

※ Default : 1-2

JP4 : DC Mode Control

Location	Header Type	Description	Function
JP4	Header 3*1	DC Mode Control (For VR)	1-2: Control to VRD
			2-3: Normal(For DC)

※ Default : 2-3

JP5 : From SoC Brightness PWM Voltage Select

Location	Header Type	Description	Function
JP5	Header 3*1	From SoC Brightness PWM Voltage Select	1-2: 3.3V
			2-3: 5.0V

※ Default : 1-2

JP6 : Brightness Control Select

Location	Header Type	Description	Function
JP6	Header 3*1	Brightness Control Select (DC Mode or PWM Mode)	1-2: DC Mode
			2-3: PWM Mode

※ Default : 1-2

JP7 : Brightness Control to VRD

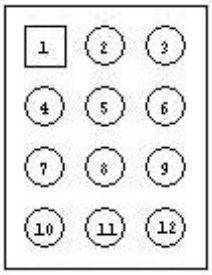
Location	Header Type	Description	Function
JP7	Header 3*1	Brightness Control to VRD(VRD PWM)	1-2: Normal Mode
			2-3: VRD Control

※ Default : 1-2

JP8, JP9 : COM Port Select

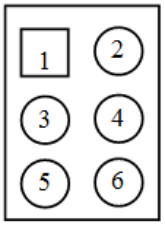
Location	Header Type	Description	Function
JP9	Header 3*4	RS232	1-2 4-5 7-8 10-11
		RS422	2-3 5-6 8-9 11-12
		RS485	

※ Default : 1-2 4-5 7-8 10-11



Location	Header Type	Description	Function
JP8	Header 2*3	RS232	1-2
		RS422	3-4
		RS485	5-6

※ Default : 1-2



JP10 : VRD Brightness Function

Location	Header Type	Description	Function
JP10	Header 3*1	VRD Brightness Function	1-2: Analog (VR)
			2-3: Digital (OSD)

※ Default : 1-2

JP11 : Clear CMOS Jump

Location	Header Type	Description	Function
JP11	Header 3*1	Clear CMOS	1-2:CLEAR CMOS
			2-3:NORMAL

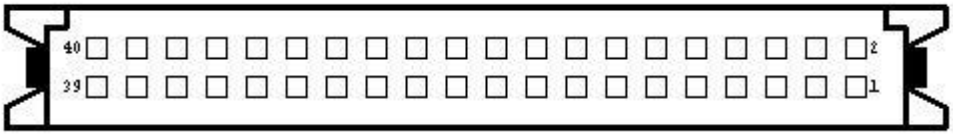
※ Default : 2-3

2.5 Connectors and Pin Assignment

The table below lists the function of each of the board's connectors.

Label	Function
LVDS	LVDS LCD Output Connector
DP	DP LCD Output Connector
HDMI	HDMI Output Connector
COM1	RS232/422/485 Connector
COM2/3	RS232 Connector
USB LAN2	USB2.0*2+Intel LAN Port
USB LAN3	USB3.0+USB2.0+Intel LAN Port
SPK	2W External Speaker
Audio	Line in/ Line out/ Mic on
VGA	VGA Connector
SATA II	SATA 2.0 Port
SATA Power	SATA Power
CPU Fan	CPU Fan
Front Panel	System Function (Power/ Reset)
3.3V	3.3V External Power
5V	5V External Power
12V	12V External Power
GPIO	General Purpose I/O
DC JACK	12V DC Jack
USB	USB2.0 Wafer
COM4	RS232 Port
LPT	Printer Port
Mini PCIe	Full/ Half-Size Mini PCIe
Mini Card Slot	For mSATA SSD Card
DDR3L SO-DIMM	DDR3L SO-DIMM Socket

2.5.1 LVDS: LVDS Connector



Pin Number	Signal Name	Pin Number	Signal Name
1	LCDVDD	2	TXOUT_L0-
3	LCDVDD	4	TXOUT_L0+
5	LCDVDD	6	TXOUT_L1-
7	GND	8	TXOUT_L1+
9	GND	10	TXOUT_L2-
11	GND	12	TXOUT_L2+
13	GND	14	TXCLK_L-
15	GND	16	TXCLK_L+
17	GND	18	TXOUT_L3-
19	GND	20	TXOUT_L3+
21	GND	22	TXOUT_U0-
23	GND	24	TXOUT_U0+
25	GND	26	TXOUT_U1-
27	GND	28	TXOUT_U1+
29	GND	30	TXOUT_U2-
31	GND	32	TXOUT_U2+
33	GND	34	TXCLK_U-
35	GND	36	TXCLK_U+
37	GND	38	TXOUT_U3-
39	GND	40	TXOUT_U3+

2.5.2 DP Connector (J2)

Pin Number	Signal Name	Pin Number	Signal Name
1	DDI1_AUX_DN_EDP	2	SMB_DATA
3	DDI1_AUX_DP_EDP	4	SMB_CLK
5	GND	6	GND
7	DDI1_TX3_DN_EDP	8	NC
9	DDI1_TX3_DP_EDP	10	NC
11	GND	12	EDP_HPD
13	DDI1_TX2_DN_EDP	14	GND
15	DDI1_TX2_DP_EDP	16	GND
17	GND	18	GND
19	DDI1_TX1_DN_EDP	20	GND
21	DDI1_TX1_DP_EDP	22	LCDVDD

23	GND	24	LCDVDD
25	DDI1_TX0_DN_EDP	26	LCDVDD
27	DDI1_TX0_DP_EDP	28	LCDVDD
29	GND	30	NC

2.5.3 HDMI

Pin Number	Signal Name	Pin Number	Signal Name
1	GND	10	GND
2	HDMIB_TMDS0-	11	HDMIB_TMDS2-
3	HDMIB_TMDS0+	12	HDMIB_TMDS2+
4	GND	13	GND
5	HDMI_DDC_CLK	14	HDMIB_CLK+
6	HDMI_DDC_DATA	15	HDMIB_CLK-
7	GND	16	HDMI_HPD1
8	HDMIB_TMDS1-	17	+V5S
9	HDMIB_TMDS1+	18	+V5S

2.5.4 USB LAN2

Pin Number	Signal Name	Pin Number	Signal Name
5A	USBVCC2	1A	USBVCC2
5	USBVCC2	1	USBVCC2
6	USB_DM2	2	USB_DM3
7	USB_DP2	3	USB_DP3
8	UGND	4	UGND
8A	UGND	4A	UGND
G3	UGND	G1	UGND
G4	UGND	G2	UGND
G11	UGND	G9	UGND
G12	UGND	G10	UGND
9	LAN2_1.9V	19	LAN2_100_10_G
10	LAN2_MDI0+	20	LAN2_1000_O
11	LAN2_MDI0-	21	LAN2_ACTIVE_Y
12	LAN2_MDI1+	22	LAN2_VDD33
13	LAN2_MDI1-	G5	UGND
14	LAN2_MDI2+	G6	UGND
15	LAN2_MDI2-	G7	UGND
16	LAN2_MDI3+	G8	UGND

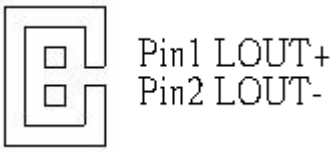
17	LAN2_MDI3-	18	LAN2_DGND

2.5.5 USB LAN3

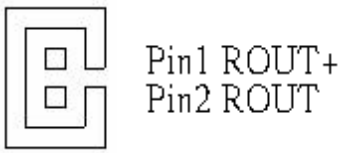
Pin Number	Signal Name	Pin Number	Signal Name
1	+5VUSB3.0	10	+5VUSB2.0
2	U2DN0	11	U2DN1
3	U2DP0	12	U2DP1
4	UGND	13	UGND
5	U3RXDN1	G3	UGND
6	U3RXDP1	G4	UGND
7	UGND	32	LAN1_100_10_G
8	U3TXDP1	31	LAN1_1000_O
9	U3TXDN1	30	LAN1_ACTIVE_Y
G1	UGND	29	LAN1_VDD33
G2	UGND	G5	UGND
19	LAN1_1.9V	G6	UGND
20	LAN1_MDI0+	G7	UGND
21	LAN1_MDI0-	G8	UGND
22	LAN1_MDI1+	28	LAN1_DGND
23	LAN1_MDI1-		
24	LAN1_MDI2+		
25	LAN1_MDI2-		
26	LAN1_MDI3+		
27	LAN1_MDI3-		

2.5.6 Speaker (Left: CN2; Right: CN1)

left



right



2.5.7 Audio Connector (AUDIO1)

(Line in、Front out、Mic in)

Pin Number	Signal Name	Pin Number	Signal Name	Pin Number	Signal Name
A2	SW_C	B2	LINE2_JD	C2	SW_B
A3	AUGND	B3	AUGND	C3	AUGND
A1	LINE1_L	B1	AZ_FOUT_L	C1	MIC1_L
A4	LINE1_R	B4	AZ_FOUT_R	C4	MIC1_R

2.5.8 D-Sub COM (Upper)+VGA (Lower) Connector

COM1

Pin Number	Signal Name
C1	DCD4/485TXRX-
C2	SRD4/485TXRX+
C3	STD4/422RX+
C4	DTR4/422RX-
C5	GND
C6	NDSR1
C7	NRTS1
C8	NCTS1
C9	NRI1

VGA

Pin Number	Signal Name	Pin Number	Signal Name	Pin Number	Signal Name
V1	R_FILTER	V6	GND	V11	NC
V2	G_FILTER	V7	GND	V12	DAC_SDAT0
V3	B_FILTER	V8	GND	V13	3VHSYNC0
V4	NC	V9	VGA_5V	V14	3VVSYNC0
V5	GND	V10	GND	V15	DAC_SCL0

2.5.9 Dual COM Port Connector

COM3

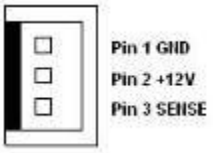
Pin Number	Signal Name
A5	GND
A9	NRI2
A4	NDTR2
A8	NCTS2
A3	NTXD2
A7	NRTS2
A2	NRXD2

A6	NDSR2
A1	NDCD2

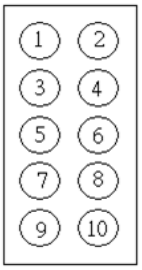
COM4

Pin Number	Signal Name
B5	GND
B9	FK_NRI3
B4	FK_NDTR3
B8	FK_NCTS3
B3	FK_NSOUT3
B7	FK_NRTS3
B2	FK_NSIN3
B6	FK_NDSR3
B1	FK_NDCD3

2.5.10 CPU_FAN: FAN CONNECTOR

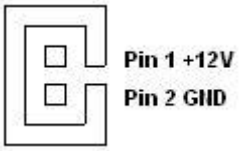


2.5.11 PANEL1: Front Panel System Function Connector

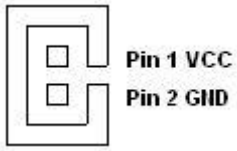


Pin	Signal Name	Pin	Signal Name
1	+V5S	2	+V3.3S
3	GND	4	-HDD_LED
5	PWRBTN#	6	GND
7	GND	8	PWRBTN#
9	N/C	10	+V5A

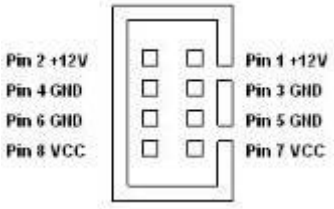
2.5.12 5V/12V/SATA Power: External Power



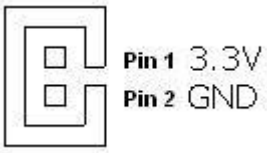
12V



5V

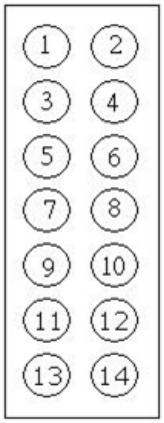


SATA Power



3.3V

2.5.13 DIDO1: Digital I/O Connector

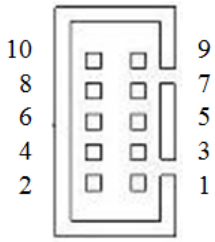


Pin	Signal Name	Pin	Signal Name
1	GND	2	+V5A
3	DOUT3	4	DOUT1
5	DOUT2	6	DOUT0
7	DINT3	8	DINT2
9	DINT1	10	DINT0
11	GPIO53_IN0	12	GPIO56_OUT0
13	GPIO54_IN1	14	GPIO57_OUT1

2.5.14 LPT

Pin Number	Signal Name	Pin Number	Signal Name
1	LPT_STB#	2	LPT_PD0
3	LPT_PD1	4	LPT_PD2
5	LPT_PD3	6	LPT_PD4
7	LPT_PD5	8	LPT_PD6
9	LPT_PD7	10	ACK#
11	BUSY	12	PE
13	SLCT	14	LPT_AFD#
15	ERR#	16	LPT_INIT#
17	LPT_SLIN#	18	GND
19	GND	20	GND

2.5.15 COM4: Serial port COM4



Pin	SYMBOL	Pin	SYMBOL
10	GND	9	GND
8	NRI1A	7	NDTR1A
6	NCTS1A	5	NTXD1A
4	NRTS1A	3	NRXD1A
2	NDSR1A	1	NDCD1A

CHAPTER 3

Chipset Driver Installation

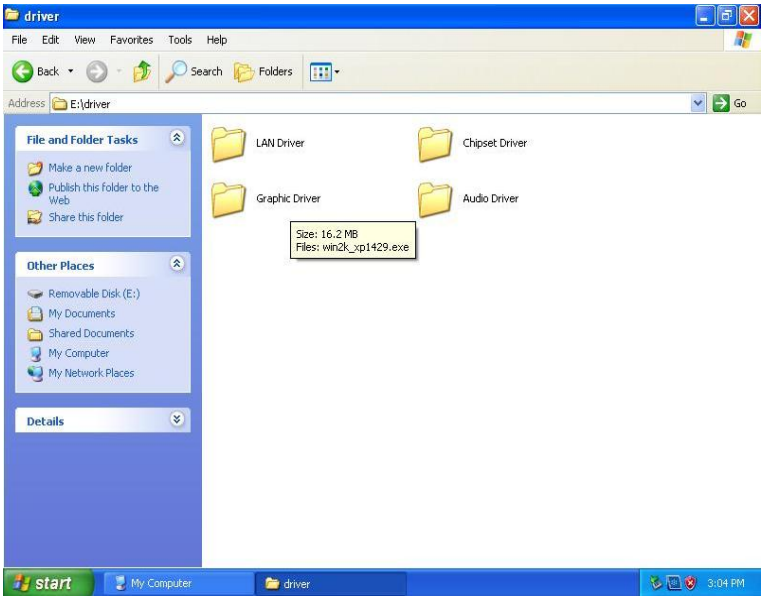
This chapter offers information on the chipset software Installation utility

- Standard CMOS Features

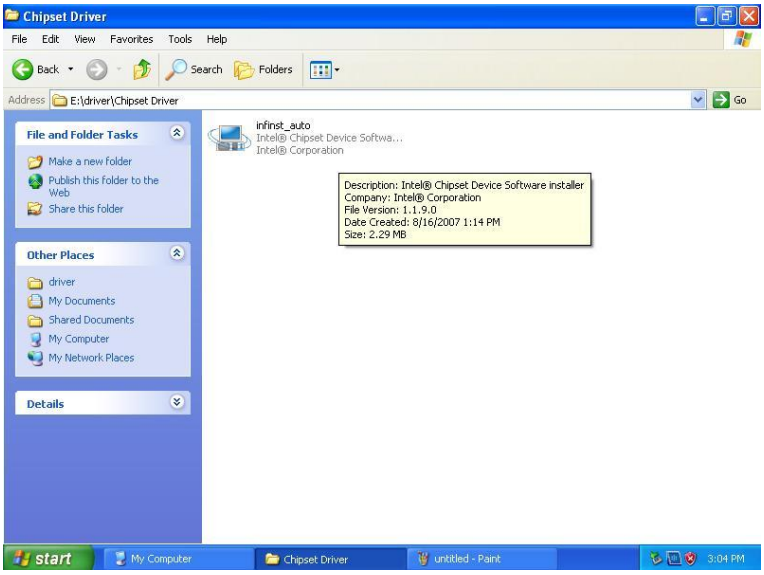
Chapter 3: Chipset Driver Installation

3.1 Standard CMOS Features

Step.1. Insert the CD that comes with the motherboard. Open the file document “Chipset Driver”.



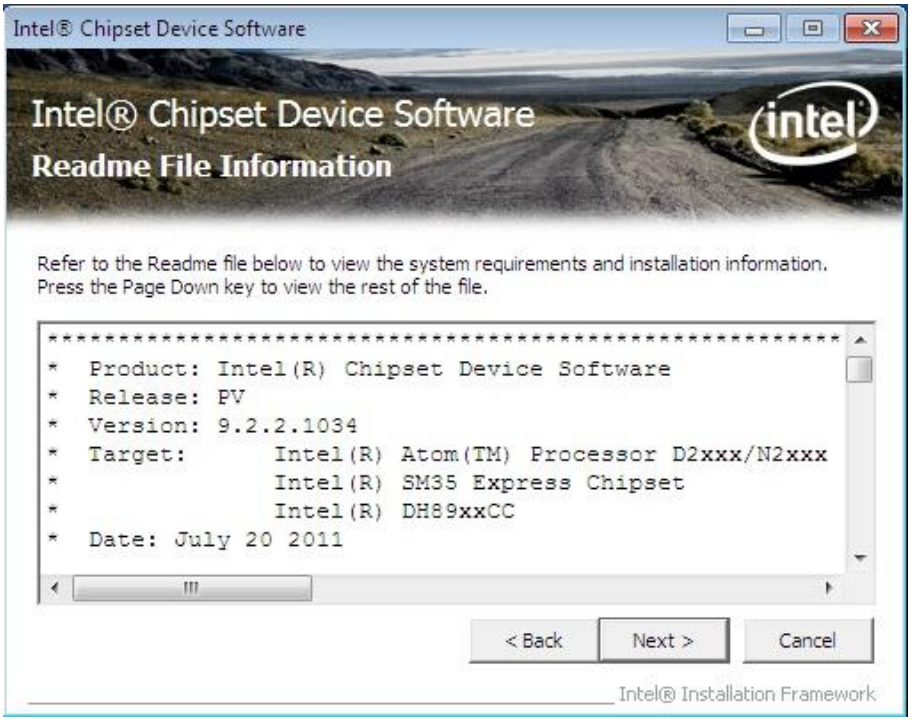
Step.2. Click on “infinst_auto.exe“ to install driver.



Step.3. Click on “Yes “ to agree License

Intel® Chipset Device Software
Intel® Chipset Device Software
License Agreement
intel
You must accept all of the terms of the license agreement in order to continue the setup program. Do you accept the terms?
INTEL SOFTWARE LICENSE AGREEMENT (OEM / IHV / ISV Distribution & Single User)
IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.
Do not use or load this software and any associated materials (collectively, the "Software") until you have carefully read the following terms and conditions. By loading or using the Software, you agree to the terms of this Agreement. If you do not wish to so agree, do not install or use the Software.
Please Also Note:
* If you are an Original Equipment Manufacturer (OEM), Independent Hardware Vendor (IHV), or Independent Software Vendor (ISV), this complete LICENSE AGREEMENT applies;
< Back
Yes
No
Intel® Installation Framework

Step.4. Click on “Next“ to install driver.


Intel® Chipset Device Software
Intel® Chipset Device Software
Readme File Information
intel
Refer to the Readme file below to view the system requirements and installation information.
Press the Page Down key to view the rest of the file.
****
* Product: Intel(R) Chipset Device Software
* Release: PV
* Version: 9.2.2.1034
* Target: Intel(R) Atom(TM) Processor D2xxx/N2xxx
* Intel(R) SM35 Express Chipset
* Intel(R) DH89xxCC
* Date: July 20 2011
< Back
Next >
Cancel
Intel® Installation Framework

Step.5. Click on “Next“ to install driver.

Intel® Chipset Device Software
Intel® Chipset Device Software
Setup Progress
Please wait while the following setup operations are performed:
Installing Driver: Intel(R) N10/ICH7 Family PCI Express Root Port - 27D4
Version: 9.1.1.1016
Installing Driver: Intel(R) N10/ICH7 Family PCI Express Root Port - 27D6
Version: 9.1.1.1016
Installing Driver: Intel(R) N10/ICH7 Family SMBus Controller - 27DA
Version: 9.1.1.1016
Installing Driver: Intel(R) N10/ICH7 Family PCI Express Root Port - 27D0
Version: 9.1.1.1016
Installing Driver: Intel(R) NM10 Family LPC Interface Controller - 27BC
Version: 9.1.1.1022
Click Next to continue.
Next
Intel® Installation Framework

Step.7. Click on “Yes, I want to restart this computer now“ to go on.

Intel® Chipset Device Software
Intel® Chipset Device Software
Setup Is Complete
You must restart this computer for the changes to take effect. Would you like to restart the computer now?
Yes, I want to restart this computer now.
No, I will restart this computer later.
Click Finish, then remove any installation media from the drives.
Finish
Intel® Installation Framework

CHAPTER 4

Graphic Driver Installation

This Chapter offers information on the chipset software installation Utility Sections include:

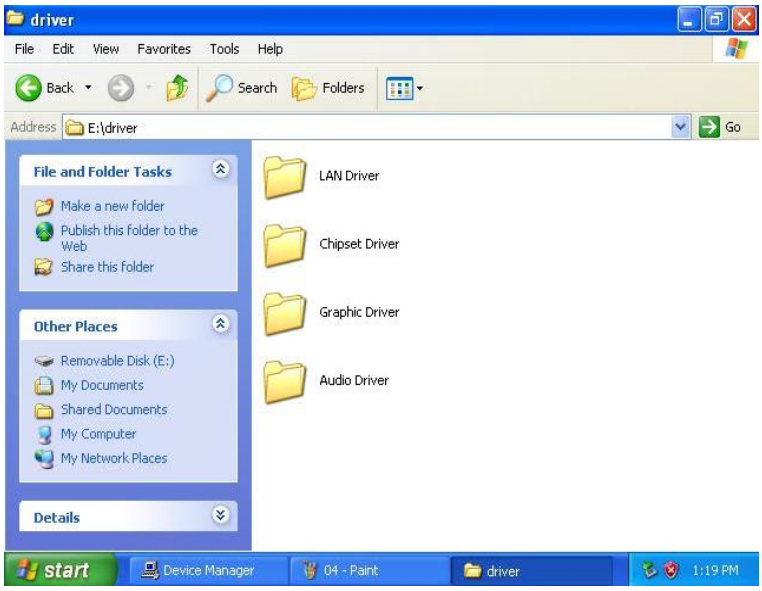
- Installation of Graphic Driver
- Panel Resolution Setting

Chapter 4: Graphic Driver Installation

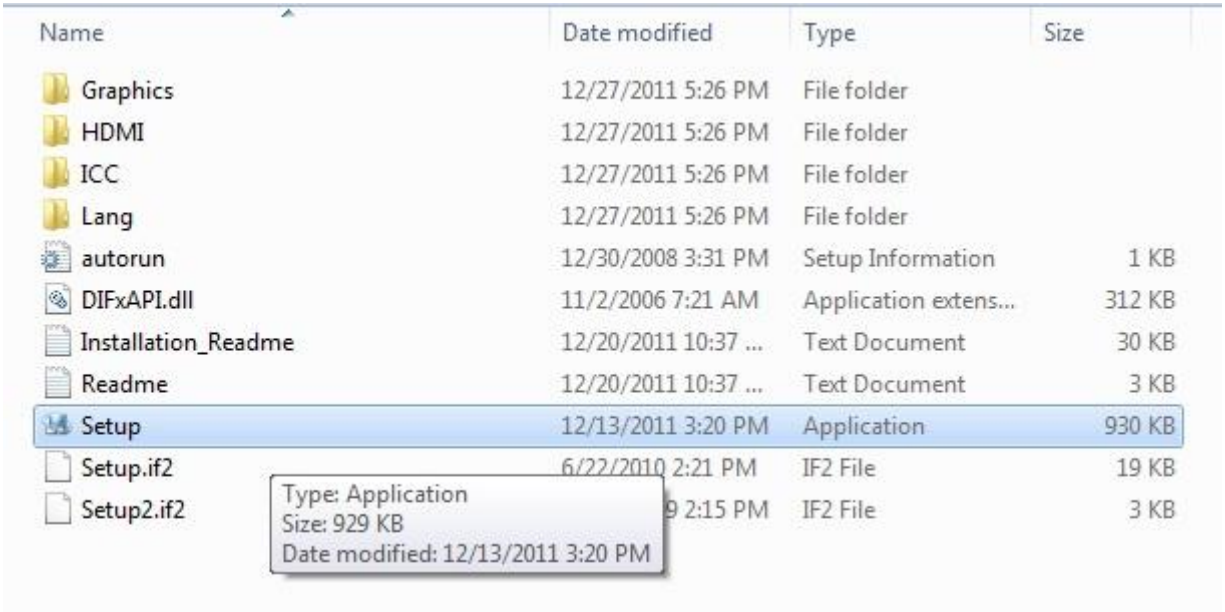
4.1 Installation of Graphic Driver

IB70 Motherboard is equipped with Intel SoC Integrated chipset Device. The Intel Graphic Drivers should be installed first, and it will enable “Video Controller (VGA compatible). Follow the instructions below to complete the installation. You will quickly complete the installation.

Step.1. Insert the CD that comes with the Motherboard. Open the file document “Graphic Driver “.



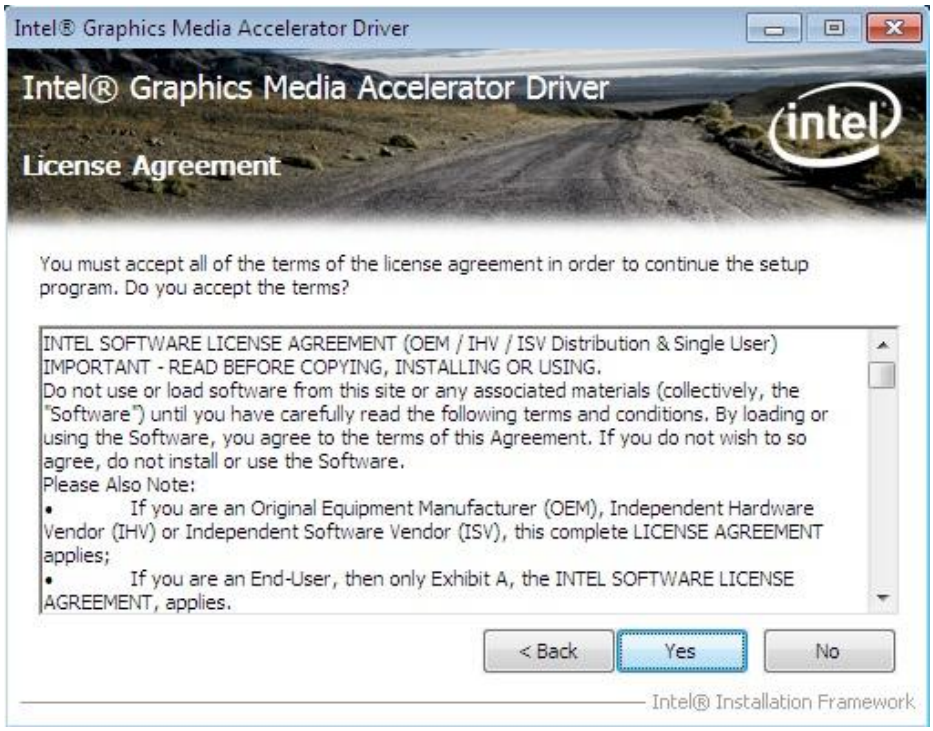
Step.2. Click on “setup” to execute the setup.


Name
Date modified
Type
Size
Graphics 12/27/2011 5:26 PM File folder
HDMI 12/27/2011 5:26 PM File folder
ICC 12/27/2011 5:26 PM File folder
Lang 12/27/2011 5:26 PM File folder
autorun 12/30/2008 3:31 PM Setup Information 1 KB
DIFxAPI.dll 11/2/2006 7:21 AM Application extens... 312 KB
Installation_Readme 12/20/2011 10:37 ... Text Document 30 KB
Readme 12/20/2011 10:37 ... Text Document 3 KB
Setup 12/13/2011 3:20 PM Application 930 KB
Setup.if2 6/22/2010 2:21 PM IF2 File 19 KB
Setup2.if2 9 2:15 PM IF2 File 3 KB
Type: Application
Size: 929 KB
Date modified: 12/13/2011 3:20 PM

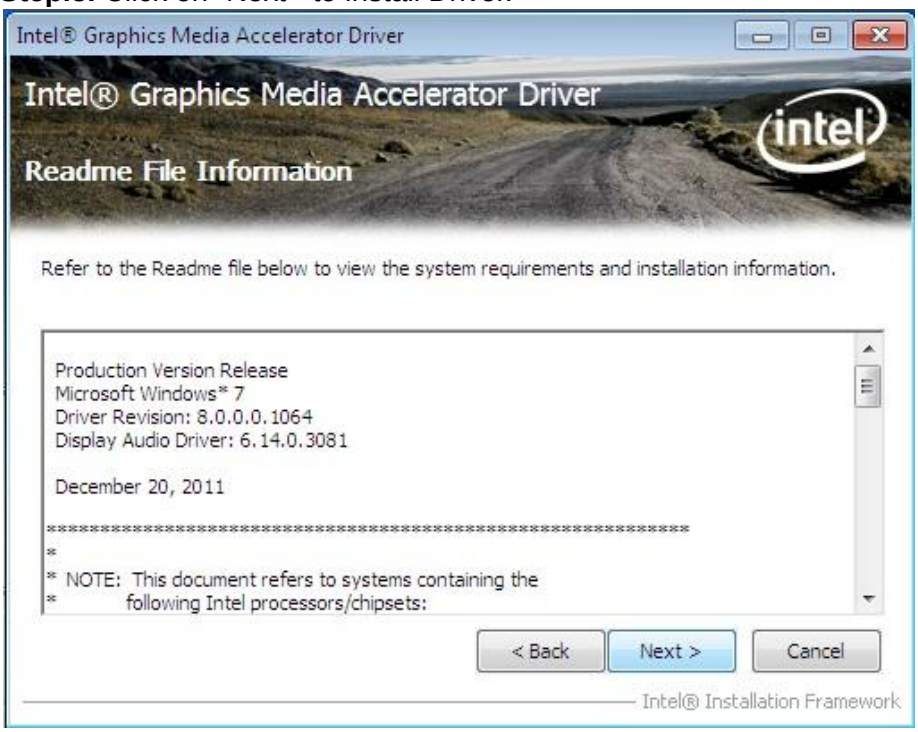
Step.3. Click on “Next “ to install Driver.

Intel® Graphics Media Accelerator Driver
Intel® Graphics Media Accelerator Driver
Welcome to the Setup Program
intel
This setup program will install the following components:
- Intel® Graphics Media Accelerator Driver
- Intel® Display Audio Driver
It is strongly recommended that you exit all programs before continuing. Click Next to continue.
Automatically run WinSAT and enable the Windows Aero desktop theme (if supported).
Install Intel® Control Center
Intel® Control Center provides a centralized starting point for Intel applications making it easier to find the programs that you need.
< Back
Next >
Cancel
Intel® Installation Framework

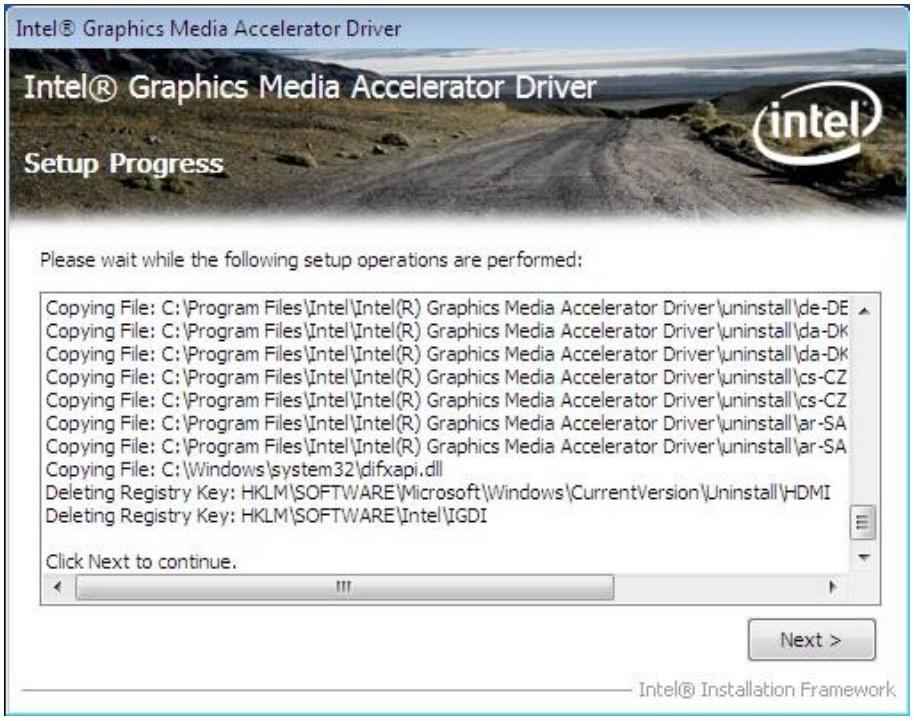
Step.4. Click on “Yes “ to agree License.


Intel® Graphics Media Accelerator Driver
Intel® Graphics Media Accelerator Driver
License Agreement
intel
You must accept all of the terms of the license agreement in order to continue the setup program. Do you accept the terms?
INTEL SOFTWARE LICENSE AGREEMENT (OEM / IHV / ISV Distribution & Single User)
IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.
Do not use or load software from this site or any associated materials (collectively, the "Software") until you have carefully read the following terms and conditions. By loading or using the Software, you agree to the terms of this Agreement. If you do not wish to so agree, do not install or use the Software.
Please Also Note:
• If you are an Original Equipment Manufacturer (OEM), Independent Hardware Vendor (IHV) or Independent Software Vendor (ISV), this complete LICENSE AGREEMENT applies;
• If you are an End-User, then only Exhibit A, the INTEL SOFTWARE LICENSE AGREEMENT, applies.
< Back
Yes
No
Intel® Installation Framework

Step.5. Click on “Next “ to install Driver.


Intel® Graphics Media Accelerator Driver
Intel® Graphics Media Accelerator Driver
Readme File Information
Refer to the Readme file below to view the system requirements and installation information.
Production Version Release
Microsoft Windows* 7
Driver Revision: 8.0.0.0.1064
Display Audio Driver: 6.14.0.3081
December 20, 2011
* NOTE: This document refers to systems containing the
* following Intel processors/chipsets:
< Back
Next >
Cancel
Intel® Installation Framework

Step.6. Click on “Next “ to install Driver.


Intel® Graphics Media Accelerator Driver
Intel® Graphics Media Accelerator Driver
Setup Progress
Please wait while the following setup operations are performed:
Copying File: C:\Program Files\Intel\Intel(R) Graphics Media Accelerator Driver\uninstall\de-DE
Copying File: C:\Program Files\Intel\Intel(R) Graphics Media Accelerator Driver\uninstall\da-DK
Copying File: C:\Program Files\Intel\Intel(R) Graphics Media Accelerator Driver\uninstall\da-DK
Copying File: C:\Program Files\Intel\Intel(R) Graphics Media Accelerator Driver\uninstall\cs-CZ
Copying File: C:\Program Files\Intel\Intel(R) Graphics Media Accelerator Driver\uninstall\cs-CZ
Copying File: C:\Program Files\Intel\Intel(R) Graphics Media Accelerator Driver\uninstall\ar-SA
Copying File: C:\Program Files\Intel\Intel(R) Graphics Media Accelerator Driver\uninstall\ar-SA
Copying File: C:\Windows\system32\difxapi.dll
Deleting Registry Key: HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\HDMI
Deleting Registry Key: HKLM\SOFTWARE\Intel\IGDI
Click Next to continue.
Next >
Intel® Installation Framework

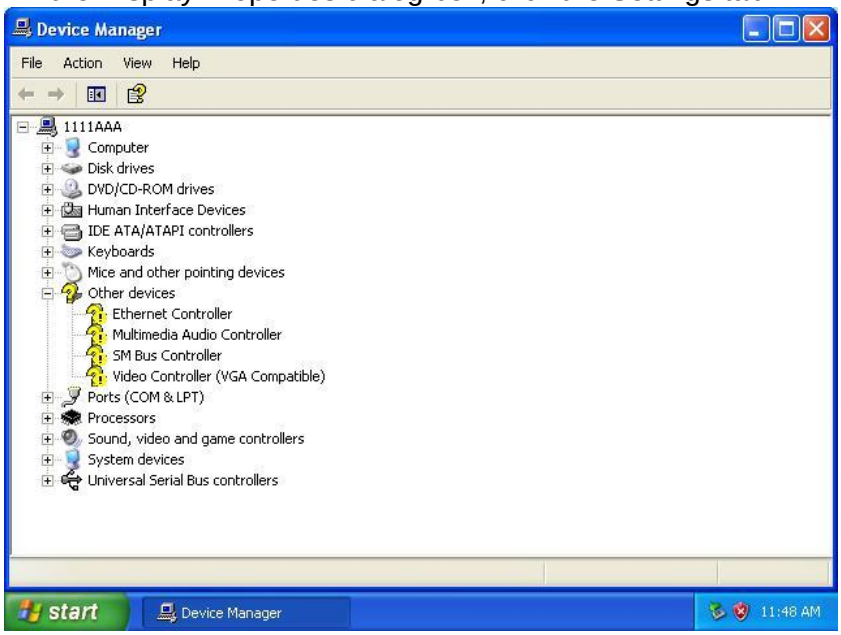
Step.7. Click on “Yes, I want to restart this computer now“ to go on.

Intel® Graphics Media Accelerator Driver
Intel® Graphics Media Accelerator Driver
Setup Is Complete
intel
You must restart this computer for the changes to take effect. Would you like to restart the computer now?
Yes, I want to restart this computer now.
No, I will restart this computer later.
Click Finish, then remove any installation media from the drives.
Finish
Intel® Installation Framework

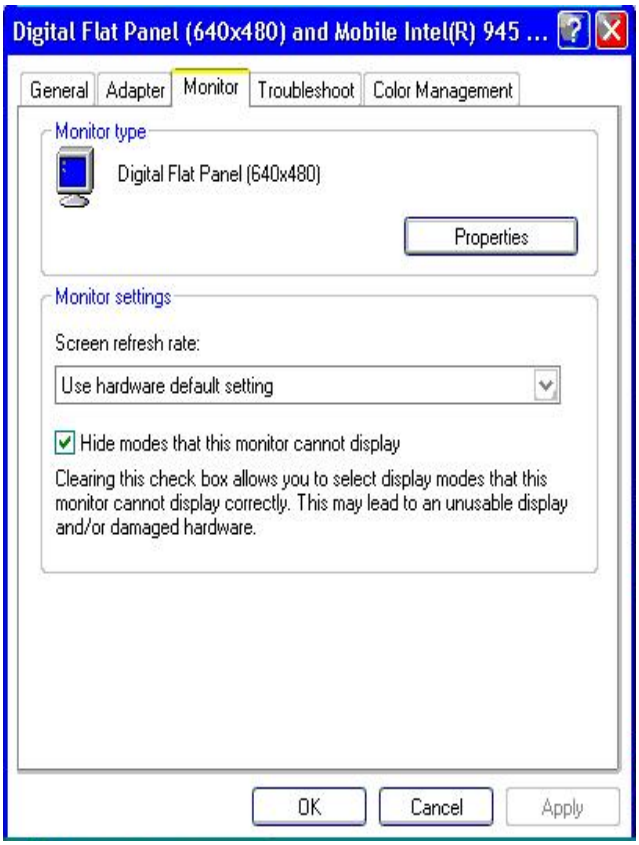
4.2 Panel Resolution Setting

Step.1. Right-click the desktop, and then click Properties.

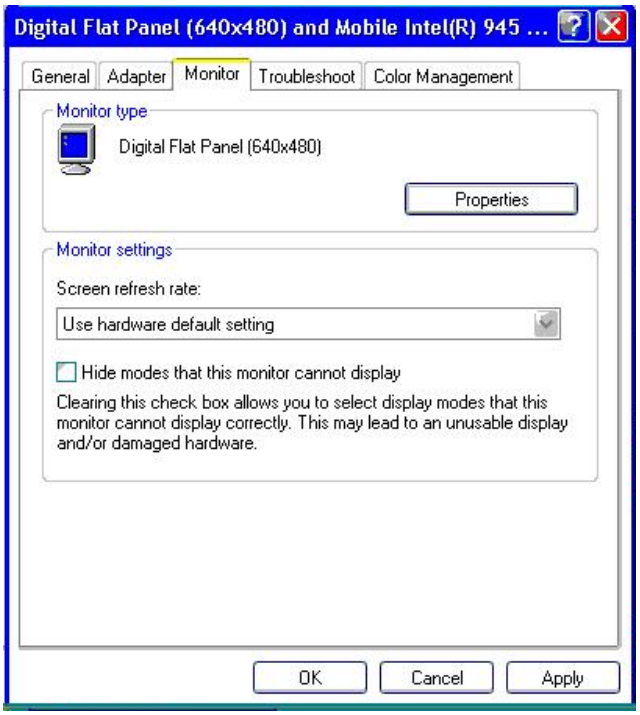
Step.2. In the Display Properties dialog box, click the Settings tab.



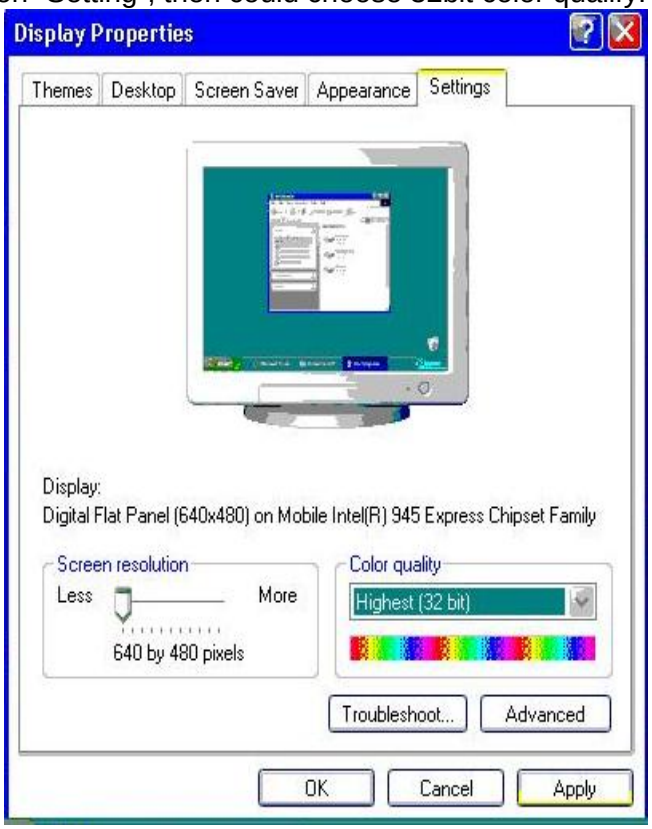
Step.3. Click on “Monitor”.



Step.4. Click on “Hide modes that this monitor cannot display” to remove this option.



Step.5. Click on “Setting”, then could choose 32bit color qualify.



CHAPTER 5

Ethernet Driver Installation

This chapter offers information on the Ethernet software installation utility. Sections include:

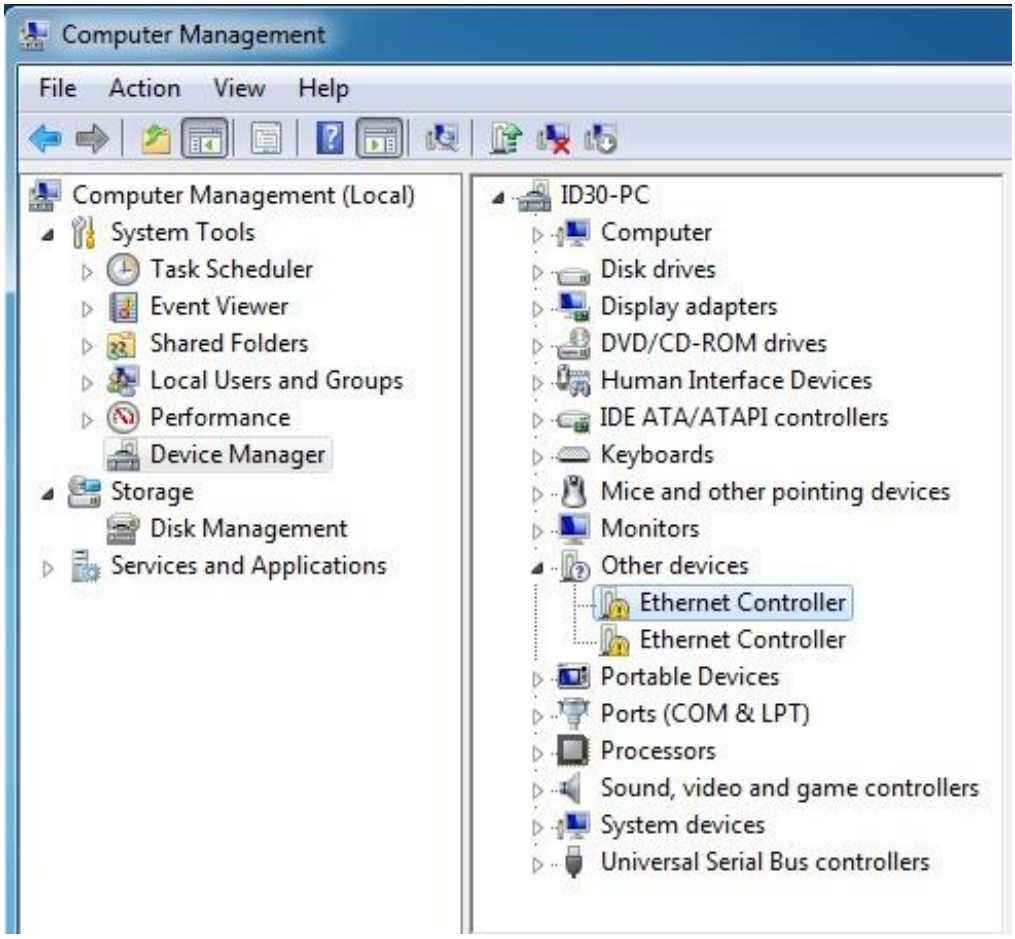
- Installation of Ethernet Driver

Chapter 5: Ethernet Driver Installation

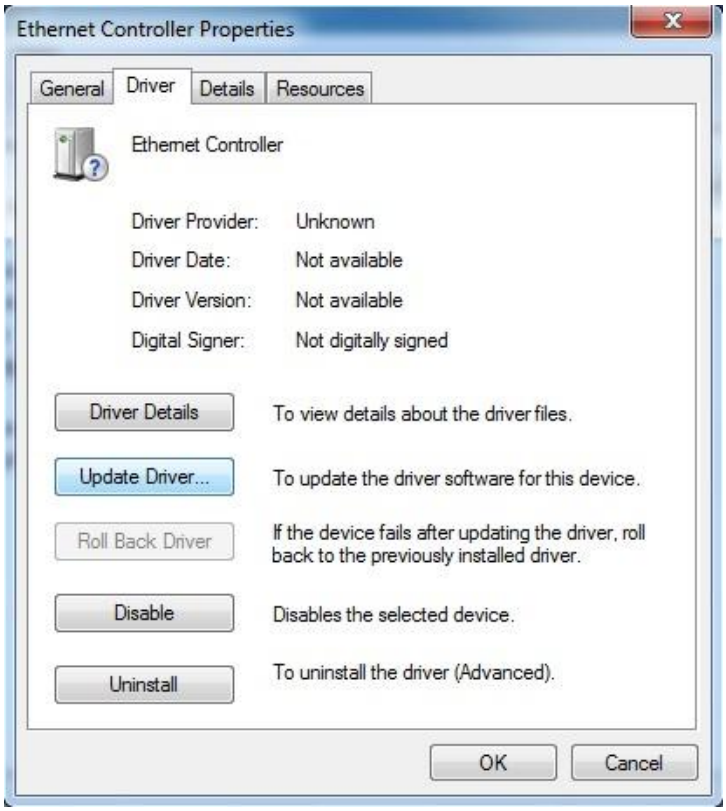
5.1 Installation of Ethernet Driver

The Users must make sure which operating system you are using in the IB70 Motherboard before installing the Ethernet drivers. Follow the steps below to complete the installation of the Intel WG82574L Gigabit Ethernet controller LAN drivers. You will quickly complete the installation.

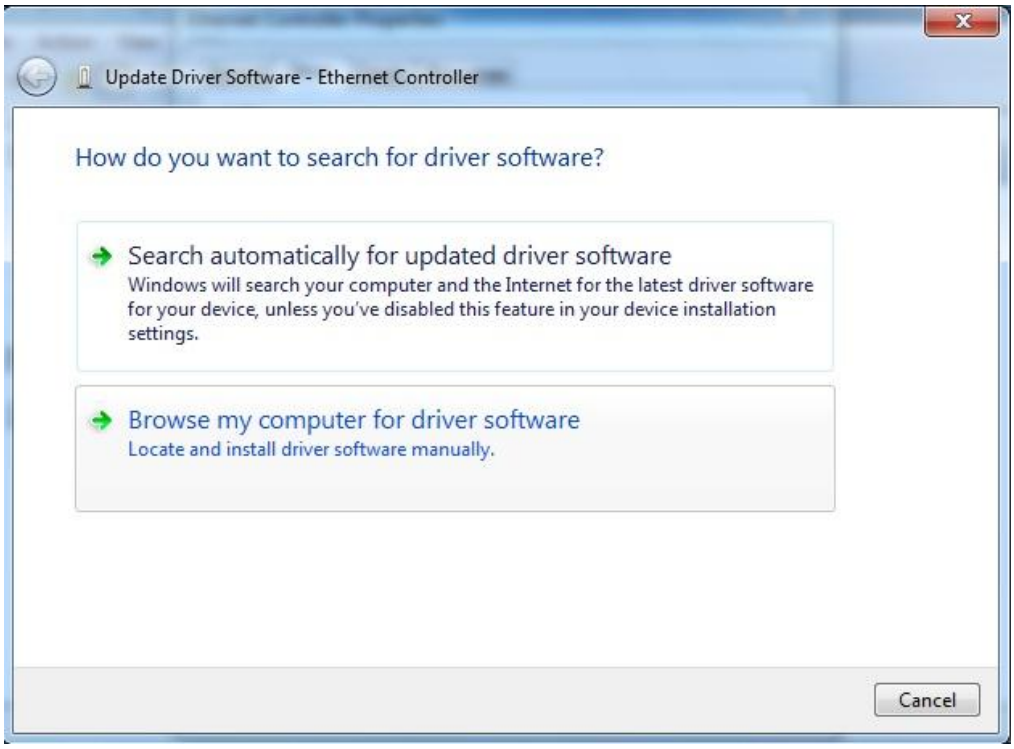
Step.1. Right-click the desktop, and then click Properties.
Step.2. In the Other device dialog box, click the Settings tab.



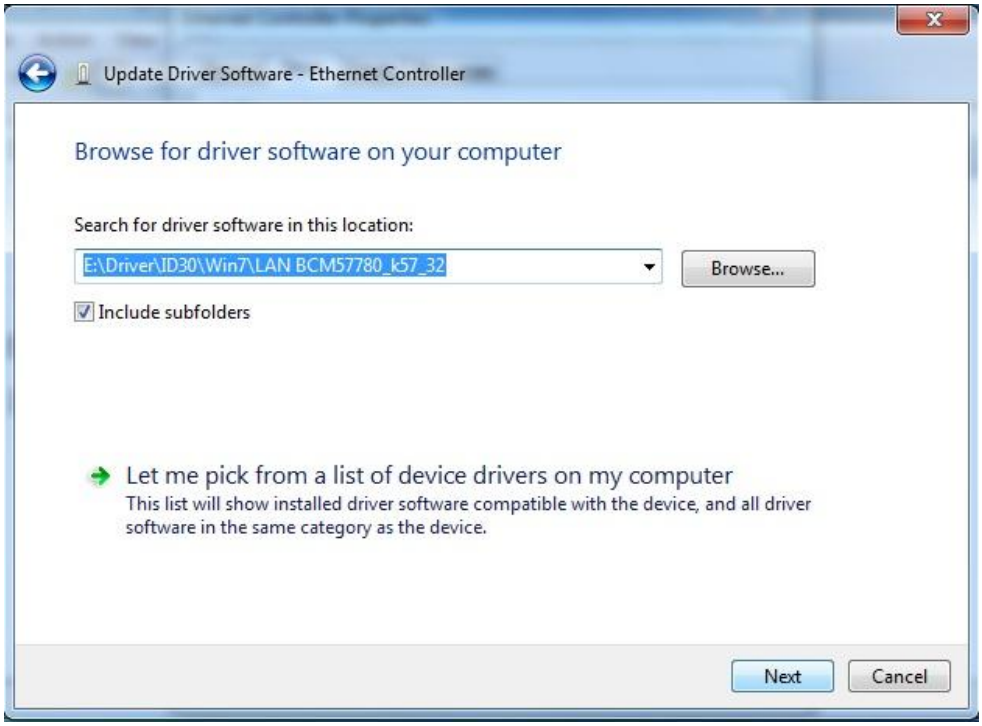
Step.2 Click on “Update Driver” to execute the setup.



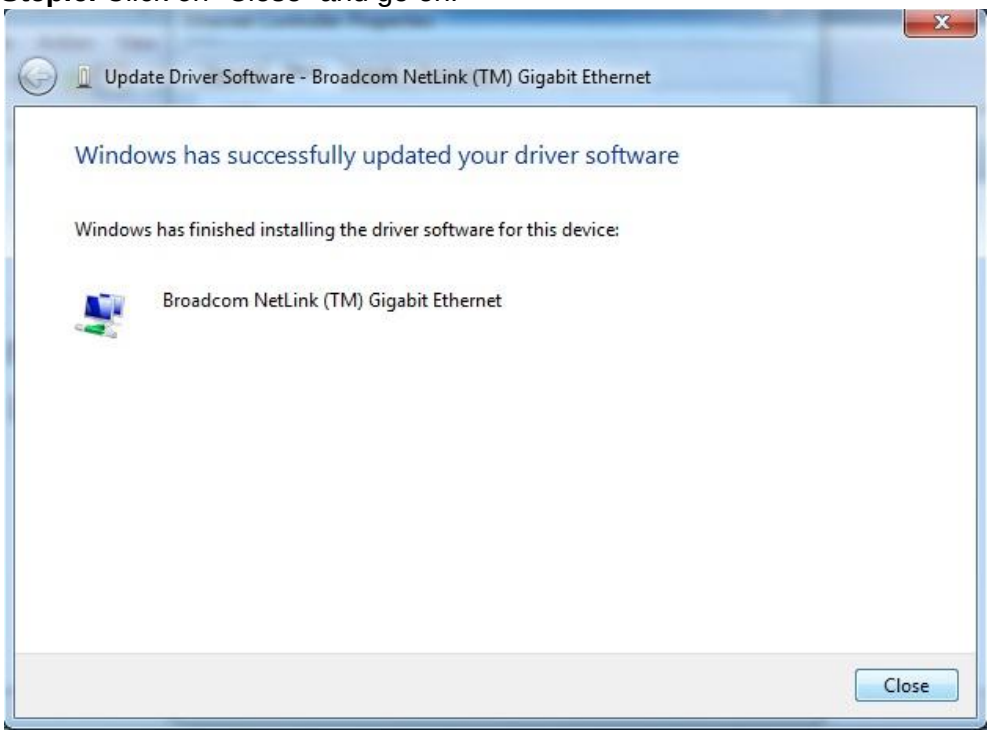
Step.4. Click on “Browse my computer for driver software“ to install driver.


Update Driver Software - Ethernet Controller
How do you want to search for driver software?
Search automatically for updated driver software
Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.
Browse my computer for driver software
Locate and install driver software manually.
Cancel

Step.5. Choose the path to install driver.


Update Driver Software - Ethernet Controller
Browse for driver software on your computer
Search for driver software in this location:
E:\Driver\ID30\Win7\LAN BCM57780_k57_32
Browse...
Include subfolders
Let me pick from a list of device drivers on my computer
This list will show installed driver software compatible with the device, and all driver software in the same category as the device.
Next
Cancel

Step.6. Click on “Close“ and go on.


Update Driver Software - Broadcom NetLink (TM) Gigabit Ethernet
Windows has successfully updated your driver software
Windows has finished installing the driver software for this device:
Broadcom NetLink (TM) Gigabit Ethernet
Close

CHAPTER 6

Audio Driver Installation

This chapter offers information on the Audio software installation utility. Sections include:

- Introduction
- Installation of Audio Driver

Chapter 6: Audio Driver Installation

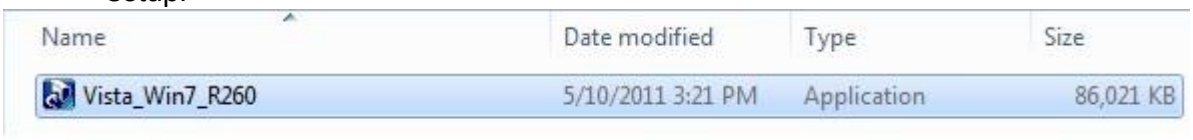
6.1 Introduction

The ALC886 series are high-performance 7.1+2 Channel High Definition Audio Codecs providing ten DAC channels that simultaneously support 7.1 sound playback, plus 2 channels of independent stereo sound output (multiple streaming) through the front panel stereo outputs. The series integrates two stereo ADCs that can support a stereo microphone, and feature Acoustic Echo Cancellation (AEC), Beam Forming (BF), and Noise Suppression (NS) technology.

6.2 Installation of Audio Driver

The users must make sure which operating system you are using in the IB70 Motherboard before installing the Audio drivers. Follow the steps below to complete the installation of the Realtek ALC886 Audio drivers. You will quickly complete the installation.

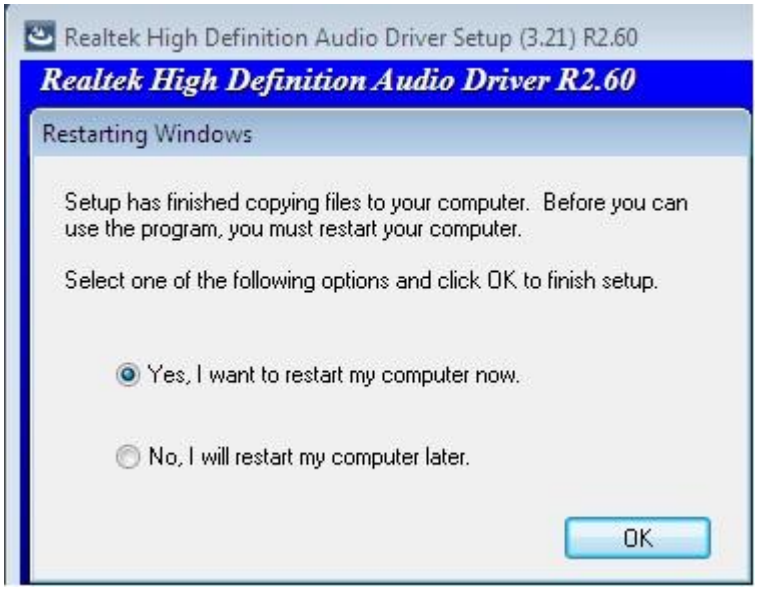
Step.1. Insert the CD that comes with the motherboard. Open the file document “alc655_driver” and click on “Vista_Win7_R260.exe” to execute the setup.



Step.2. Click on “Yes“ to install driver.

Realtek High Definition Audio Driver Setup (3.21) R2.60
Realtek High Definition Audio Driver R2.60
Realtek High Definition Audio Driver - InstallShield Wizard
Welcome to the InstallShield Wizard
The InstallShield Wizard will install Realtek High Definition Audio Driver on your computer .
Do you want to continue the installation of new driver ?
Yes
No

Step.3. Click on “Yes, I want to restart my computer now” to finish installation.


Realtek High Definition Audio Driver Setup (3.21) R2.60
Realtek High Definition Audio Driver R2.60
Restarting Windows
Setup has finished copying files to your computer. Before you can use the program, you must restart your computer.
Select one of the following options and click OK to finish setup.
Yes, I want to restart my computer now.
No, I will restart my computer later.
OK

CHAPTER 7

USB 3.0 Installation

This chapter offers information on the USB 3.0 driver installation utility.

- Installation

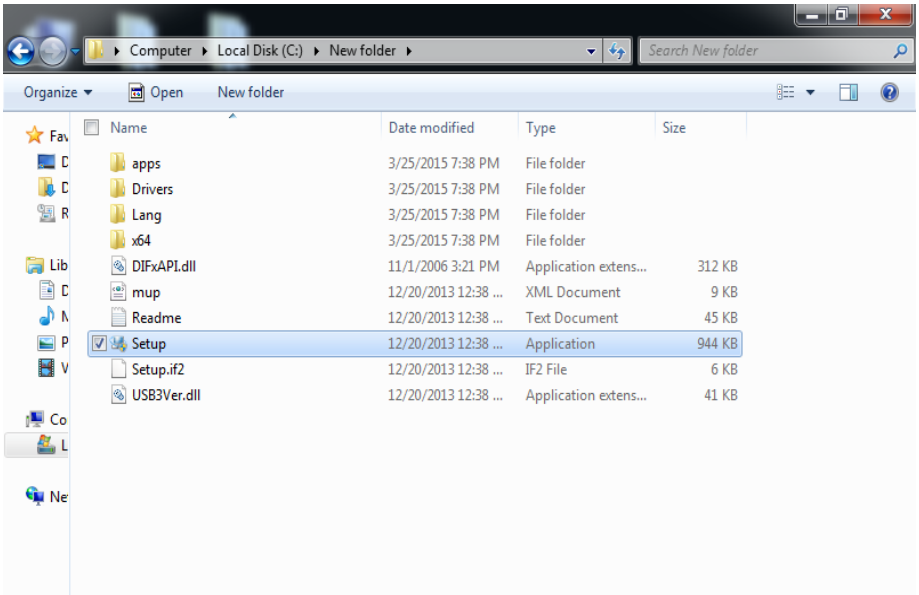
Chapter 7: USB 3.0 Installation

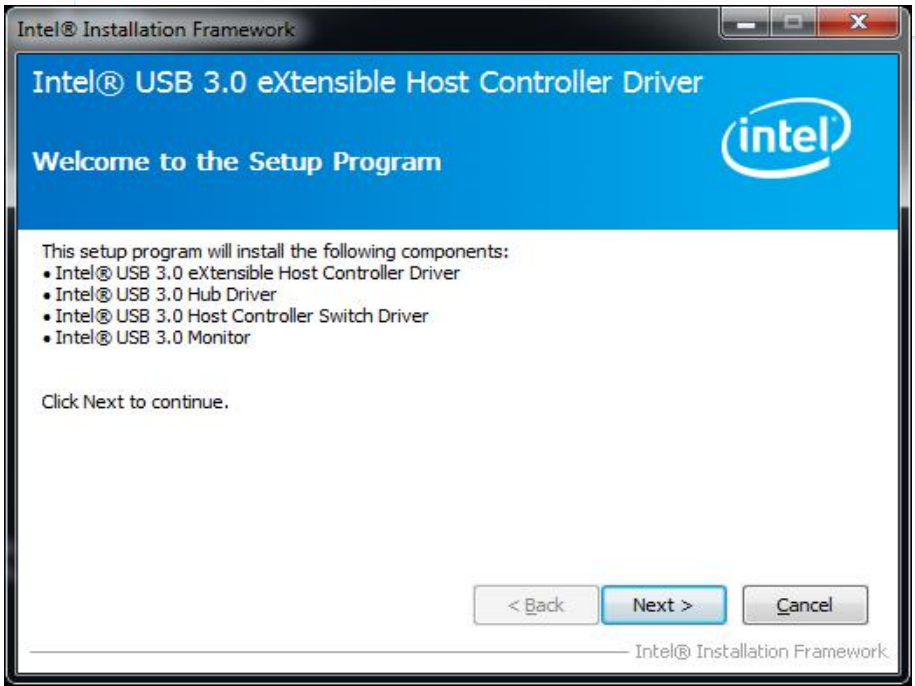
7.1 Installation

IH32 Motherboard is designed with Intel mobile Core i5 dual core CPU with the Intel®
USB 3.0 eXtensible Host Controller.
You need to install the Intel® USB 3.0 eXtensible Host Controller driver to enable the function.

Step.1. Locate the hard drive directory where the driver files are stored with the browser or the explore feature of Windows*.

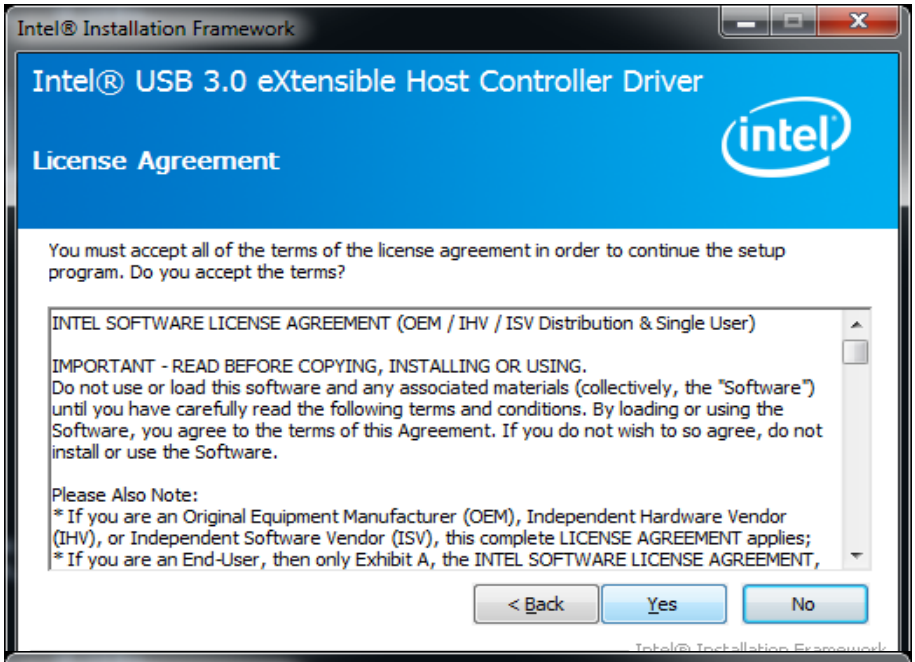
Step.2. Double click the “Setup.exe” from this directory.

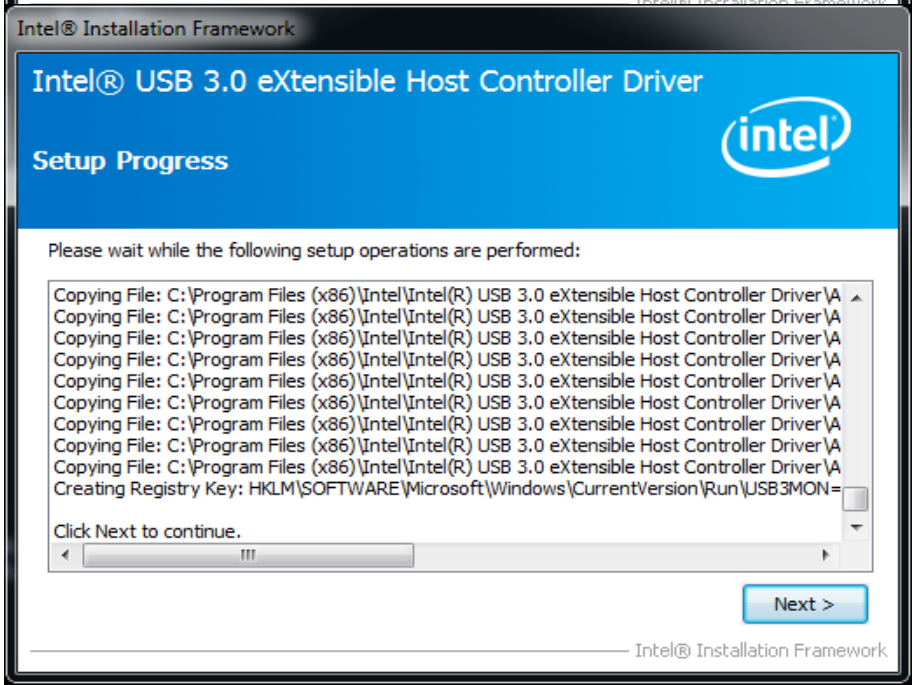

Computer ▸ Local Disk (C:) ▸ New folder ▸
Search New folder
Organize
Open
New folder
Name
Date modified
Type
Size
apps 3/25/2015 7:38 PM File folder
Drivers 3/25/2015 7:38 PM File folder
Lang 3/25/2015 7:38 PM File folder
x64 3/25/2015 7:38 PM File folder
DIFxAPI.dll 11/1/2006 3:21 PM Application extens... 312 KB
mup 12/20/2013 12:38 ... XML Document 9 KB
Readme 12/20/2013 12:38 ... Text Document 45 KB
Setup 12/20/2013 12:38 ... Application 944 KB
Setup.if2 12/20/2013 12:38 ... IF2 File 6 KB
USB3Ver.dll 12/20/2013 12:38 ... Application extens... 41 KB


Intel® Installation Framework
Intel® USB 3.0 eXtensible Host Controller Driver
Welcome to the Setup Program
intel
This setup program will install the following components:
• Intel® USB 3.0 eXtensible Host Controller Driver
• Intel® USB 3.0 Hub Driver
• Intel® USB 3.0 Host Controller Switch Driver
• Intel® USB 3.0 Monitor
Click Next to continue.
< Back
Next >
Cancel
Intel® Installation Framework

Step.3. Click “Next” to continue.

Step.4. Read License Agreement and click “Yes” to proceed.

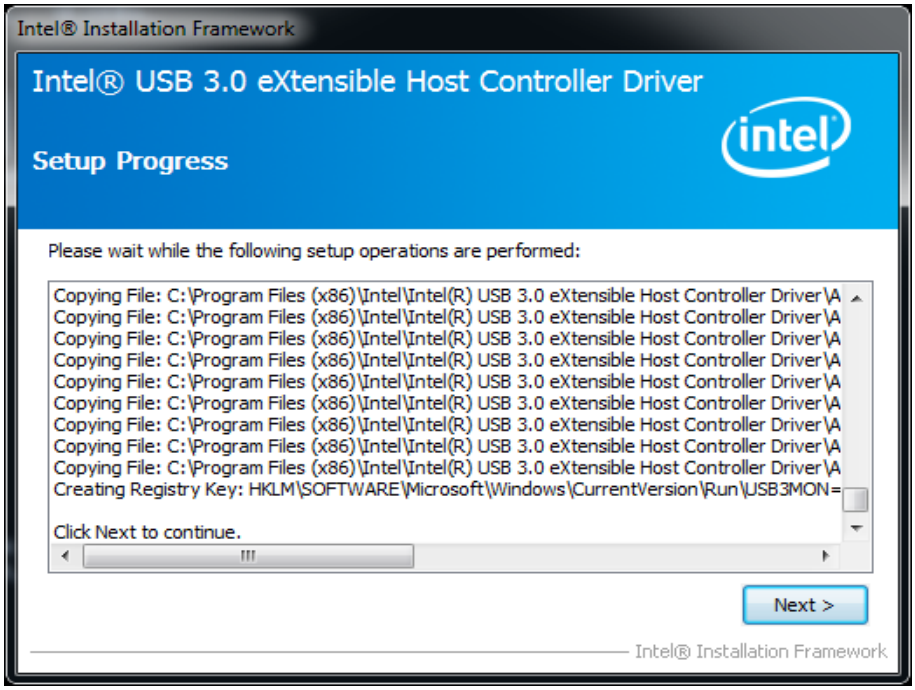




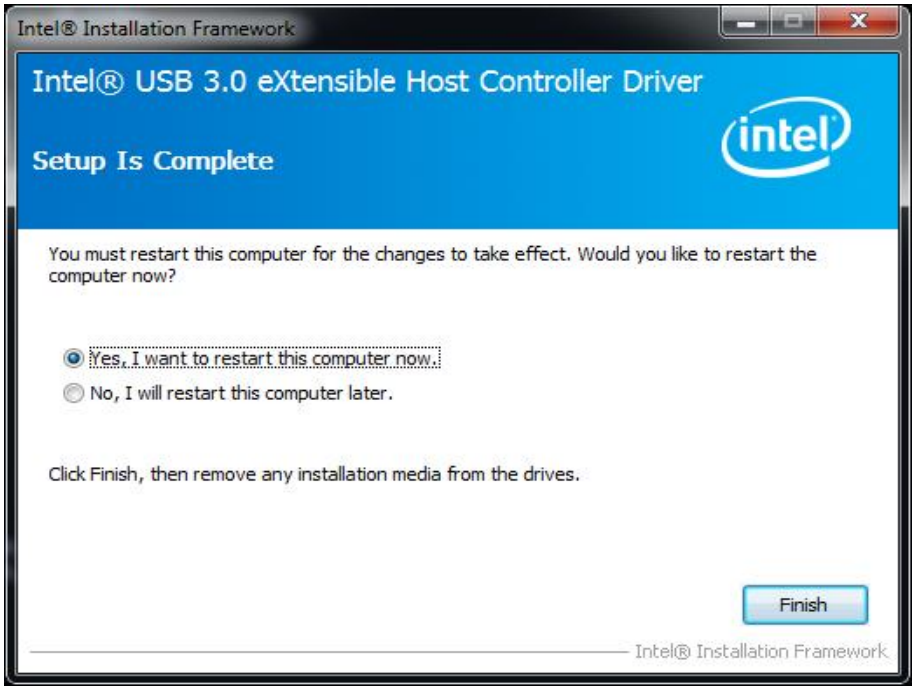
Step.5. Review Readme File Information and click “Next” to proceed.

Step.6. When the “Setup Progress” is complete click “Next” to proceed.

Step.7. When the “Setup Progress” is complete click “Next” to proceed.



Step.8. Lastly, the “Setup Complete” screen appears so click “Finish” to restart your computer.


Intel® Installation Framework
Intel® USB 3.0 eXtensible Host Controller Driver
Setup Is Complete
intel
You must restart this computer for the changes to take effect. Would you like to restart the computer now?
Yes, I want to restart this computer now.
No, I will restart this computer later.
Click Finish, then remove any installation media from the drives.
Finish
Intel® Installation Framework

Fintek COM Port Driver Installation

CHAPTER 8

This chapter describes the step by step method to install the Fintek COM port driver.

- Installation

Chapter 8: Fintek COM Port Driver Installation

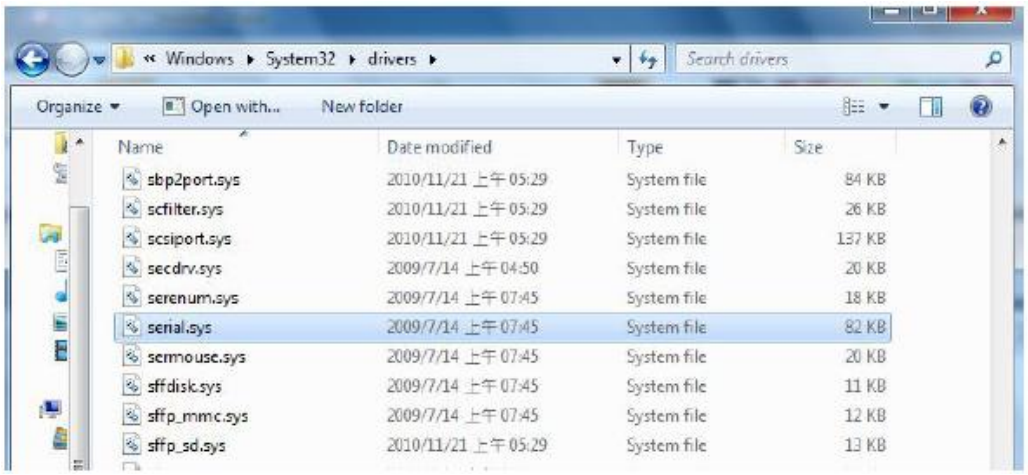
STEP 1.If the system is WIN7 please first do close UAC.(Refer following "Disabling User Account Control (UAC) in Windows 7")

STEP 2.Extract the Patch_0408.zip to a folder.

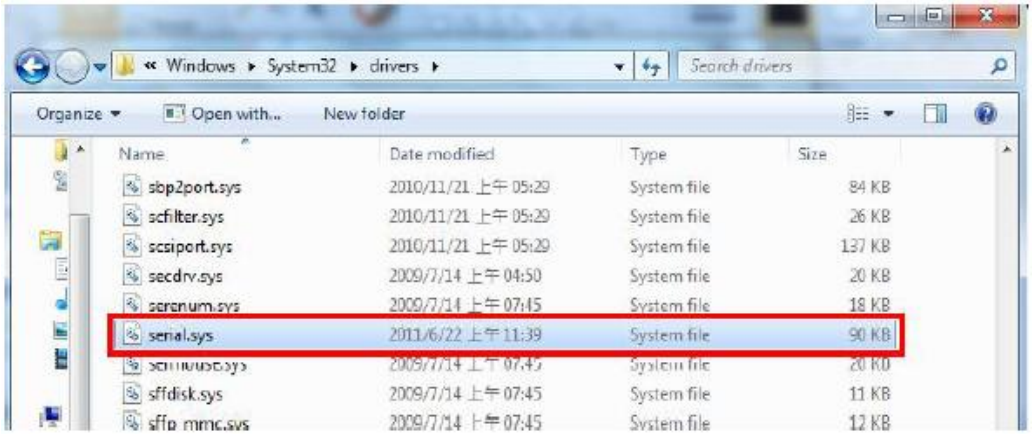
STEP 3.Double-click batch file(patch.bat) will install driver.

STEP 4.Check driver install success.

Before the update or update fail.


Windows ▸ System32 ▸ drivers ▸
Search drivers
Organize
Open with...
New folder
Name
Date modified
Type
Size
sbp2port.sys 2010/11/21 上午 05:29 System file 84 KB
scfilter.sys 2010/11/21 上午 05:29 System file 26 KB
scsiport.sys 2010/11/21 上午 05:29 System file 137 KB
secdrv.sys 2009/7/14 上午 04:50 System file 20 KB
serenum.sys 2009/7/14 上午 07:45 System file 18 KB
serial.sys 2009/7/14 上午 07:45 System file 82 KB
sermouse.sys 2009/7/14 上午 07:45 System file 20 KB
sffdisk.sys 2009/7/14 上午 07:45 System file 11 KB
sffp_mmc.sys 2009/7/14 上午 07:45 System file 12 KB
sffp_sd.sys 2010/11/21 上午 05:29 System file 13 KB

After the update and update success.


Windows ▸ System32 ▸ drivers ▸
Search drivers
Organize
Open with...
New folder
Name
Date modified
Type
Size
sbp2port.sys 2010/11/21 上午 05:29 System file 84 KB
scfilter.sys 2010/11/21 上午 05:29 System file 26 KB
scsiport.sys 2010/11/21 上午 05:29 System file 137 KB
secdrv.sys 2009/7/14 上午 04:50 System file 20 KB
serenum.sys 2009/7/14 上午 07:45 System file 18 KB
serial.sys 2011/6/22 上午 11:39 System file 90 KB
sffdisk.sys 2009/7/14 上午 07:45 System file 11 KB
sffp_mmc.sys 2009/7/14 上午 07:45 System file 12 KB

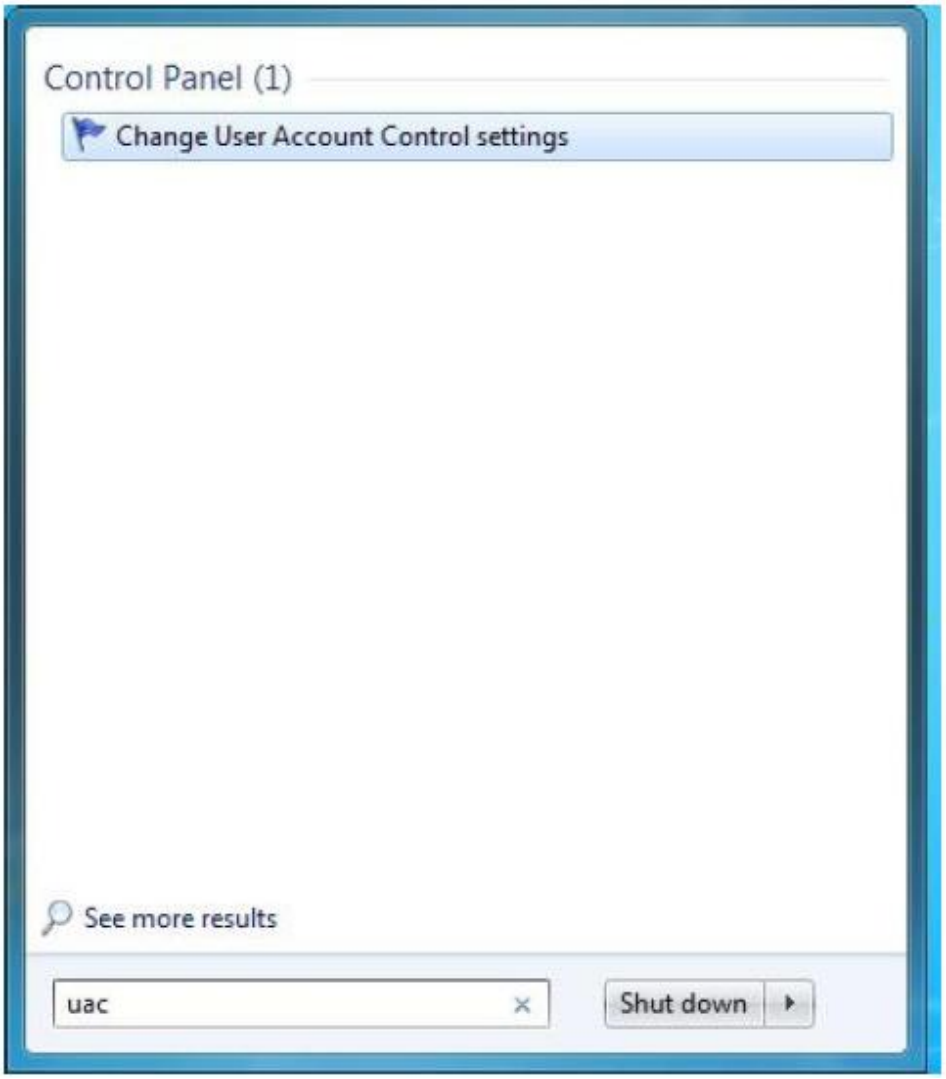
STEP 5.You will need to restart your computer for driver install success.

Type in this command from the Run menu:

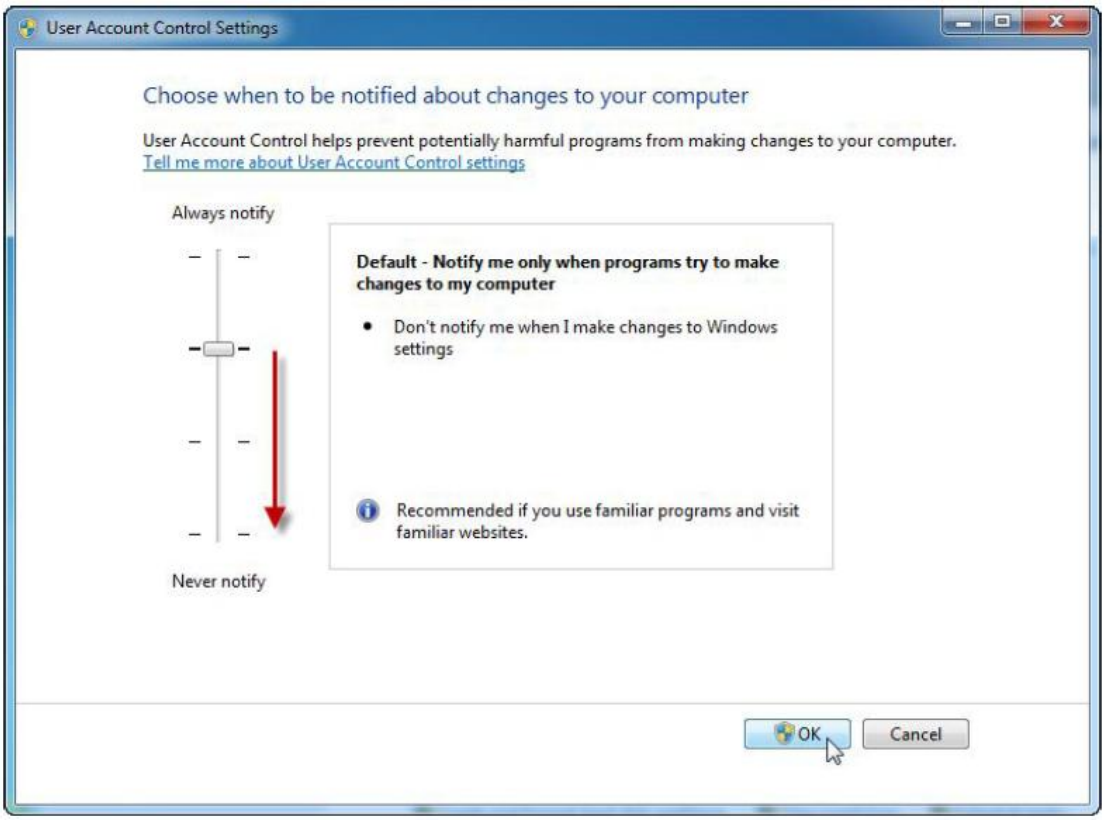
C:\Windows\System32\UserAccountControlSettings.exe

or

uac



To turn off UAC, move the slider to the Never notify position, and then click OK. If you're prompted for an administrator password or confirmation, type the password or provide confirmation.


User Account Control Settings
Choose when to be notified about changes to your computer
User Account Control helps prevent potentially harmful programs from making changes to your computer.
Tell me more about User Account Control settings
Always notify
Default - Notify me only when programs try to make changes to my computer
Don't notify me when I make changes to Windows settings
Recommended if you use familiar programs and visit familiar websites.
Never notify
OK
Cancel

To turn UAC back on, move the slider to choose when you want to be notified, and then click OK. If
you're prompted for an administrator password or confirmation, type the password or provide
confirmation.
You will need to restart your computer for UAC to be turned off.

CHAPTER 9

AMI BIOS Setup

This chapter describes how to set up the BIOS configuration

- How and When to Use BIOS Setup
- BIOS Functions
- Using Recovery Wizard to Restore Computer

Chapter 9: AMI BIOS SETUP

9.1 How and When to Use BIOS Setup

For enter to the Tablet PC BIOS setup, you need to connect with an external USB keyboard, press "**Del**" key when the prompt appears on the screen during start up. The prompt screen shows only few seconds so need press Del key quickly.

**NOTICE

Updated BIOS version may be published after the manual is released. Check with the latest version of BIOS on website.
You may need to run BIOS setup utility when the below status.

1. Error message on sreen indicate to check BIOS setup.
2. Restoring the factory default settings.
3. Modifing the specific hardware specification
4. Want to optimize the specification.

In order to control the keyboard to select BIOS utility setup, you need

Keyboard Icon	Function Description
← →	Selects a menu title.
↑ ↓	Selects an item or option.
Enter	Go to the sub-menu when available. Opens or closes the option window when an item is selected.
Esc	To leave sub-menu and return to main menu.

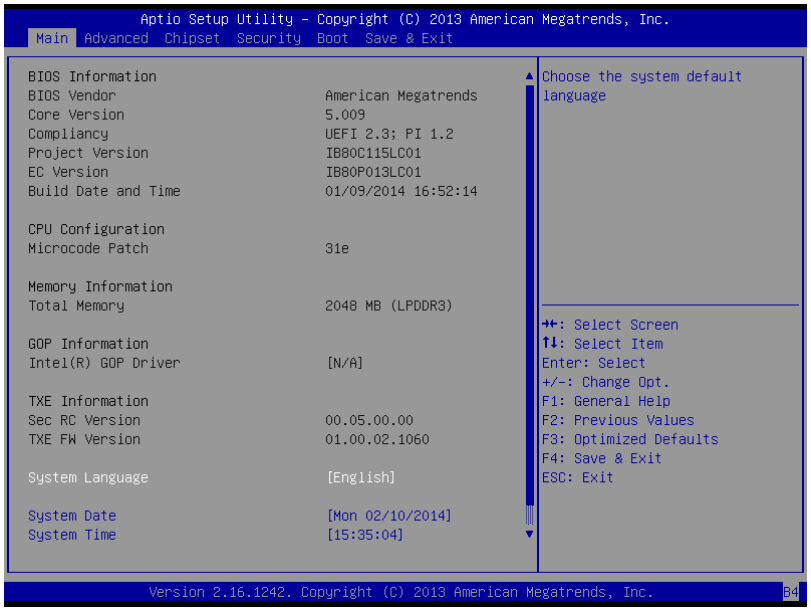
**NOTICE

You can press the F1, F2, F3, F4, –/+, and Esc keys by connecting a USB keyboard to your tablet PC.

9.2 BIOS Functions

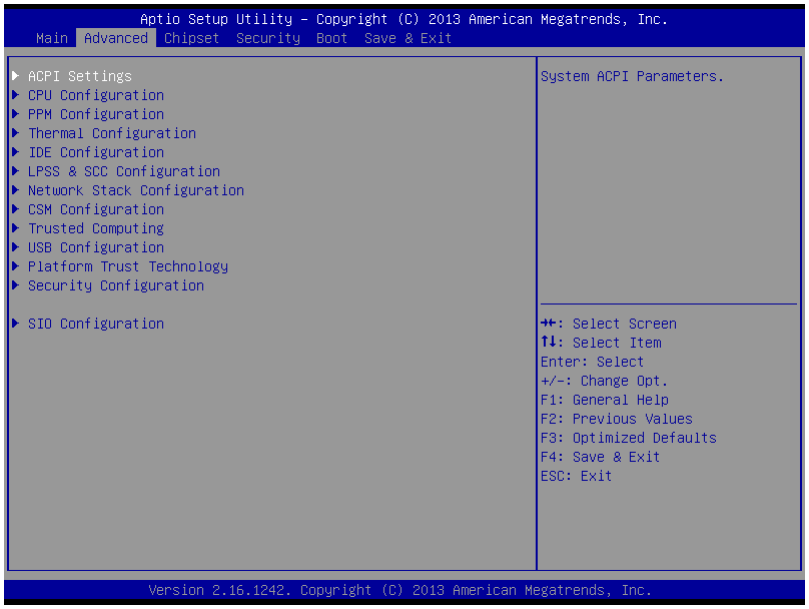
9.2.1 Main Menu

The Main menu contains the information of the Tablet system including BIOS version, processor RC version, system language, time, and date.

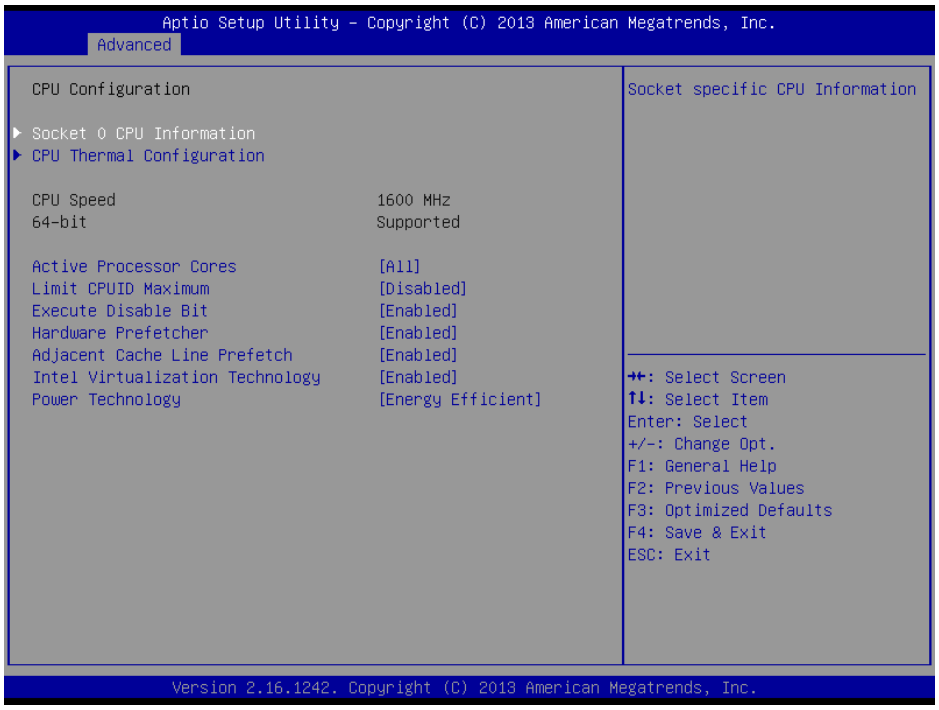


9.2.2 Advanced Menu

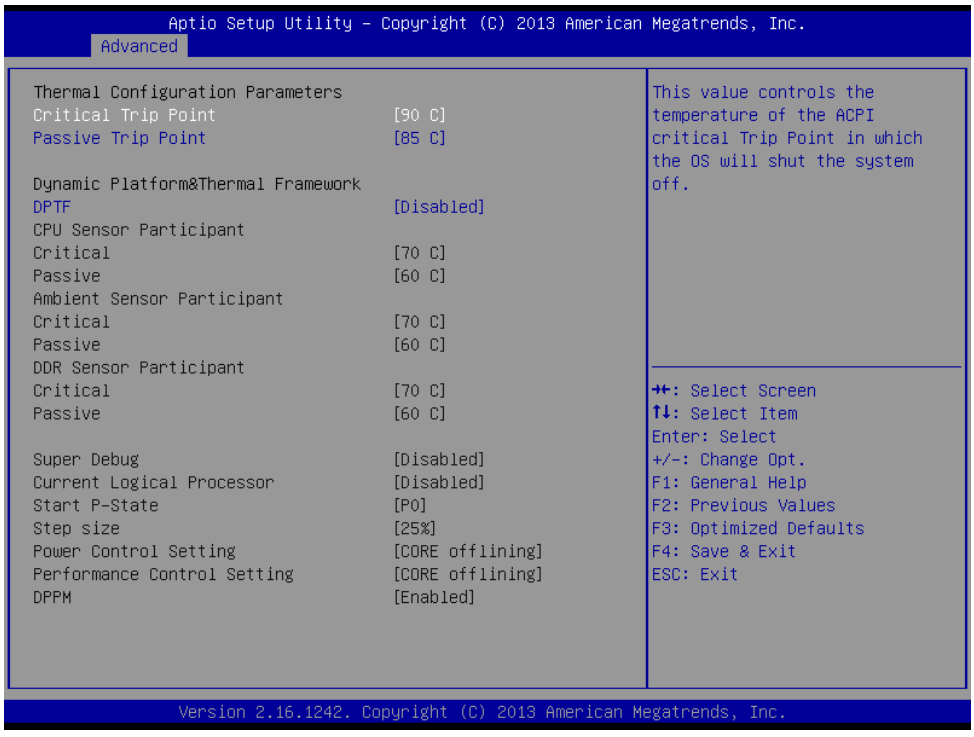
The Advanced menu contains the selections of PXE OpROM and Watch Dog Timer, and the settings of PCI Subsystem, ACPI, and S5 RTC Wake. Besides, it also contains the configuration information of CPU, Thermal, IDE/SATA, USB, and PPM Configuration.



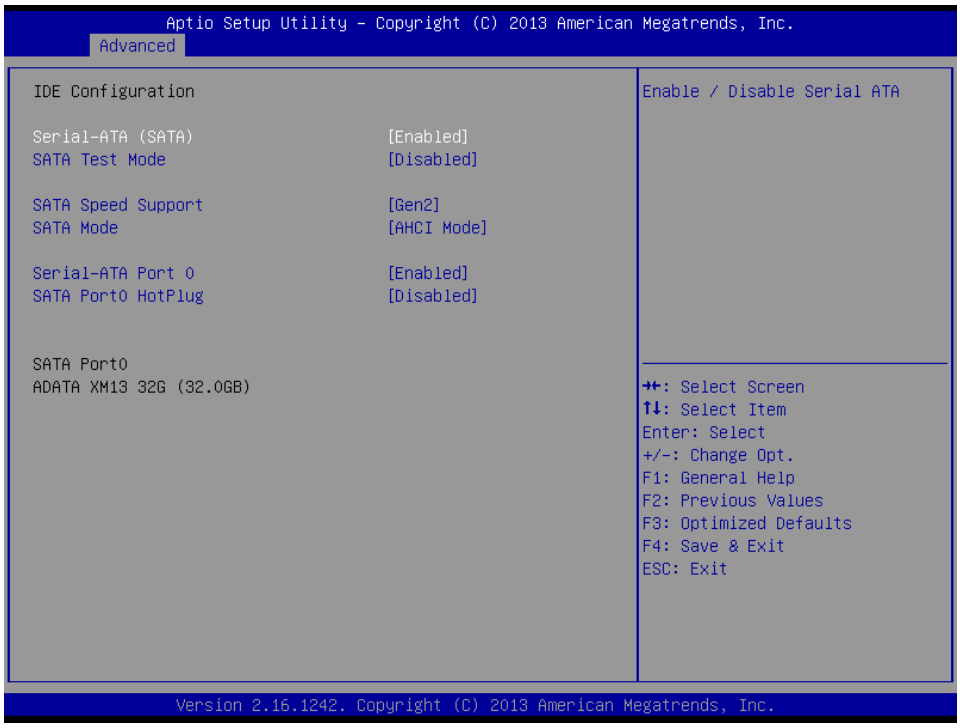
1. CPU Configuration



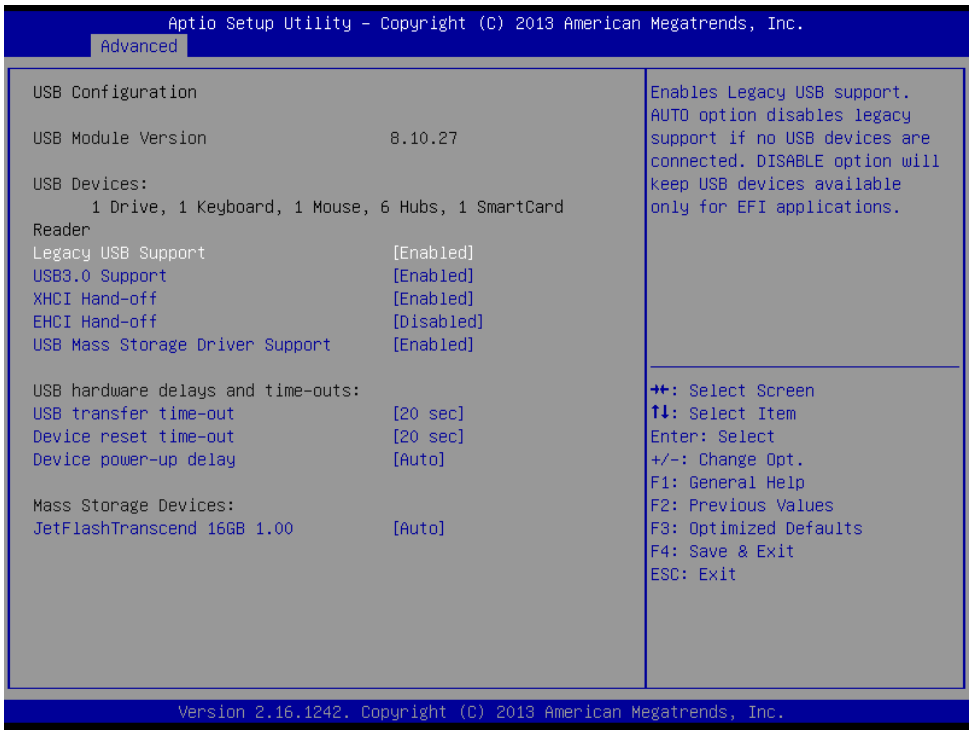
2. Thermal Configuration


Aptio Setup Utility – Copyright (C) 2013 American Megatrends, Inc.
Advanced
Thermal Configuration Parameters
Critical Trip Point [90 C]
Passive Trip Point [85 C]
Dynamic Platform&Thermal Framework
DPTF [Disabled]
CPU Sensor Participant
Critical [70 C]
Passive [60 C]
Ambient Sensor Participant
Critical [70 C]
Passive [60 C]
DDR Sensor Participant
Critical [70 C]
Passive [60 C]
Super Debug [Disabled]
Current Logical Processor [Disabled]
Start P-State [P0]
Step size [25%]
Power Control Setting [CORE offlining]
Performance Control Setting [CORE offlining]
DPPM [Enabled]
This value controls the temperature of the ACPI critical Trip Point in which the OS will shut the system off.
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.

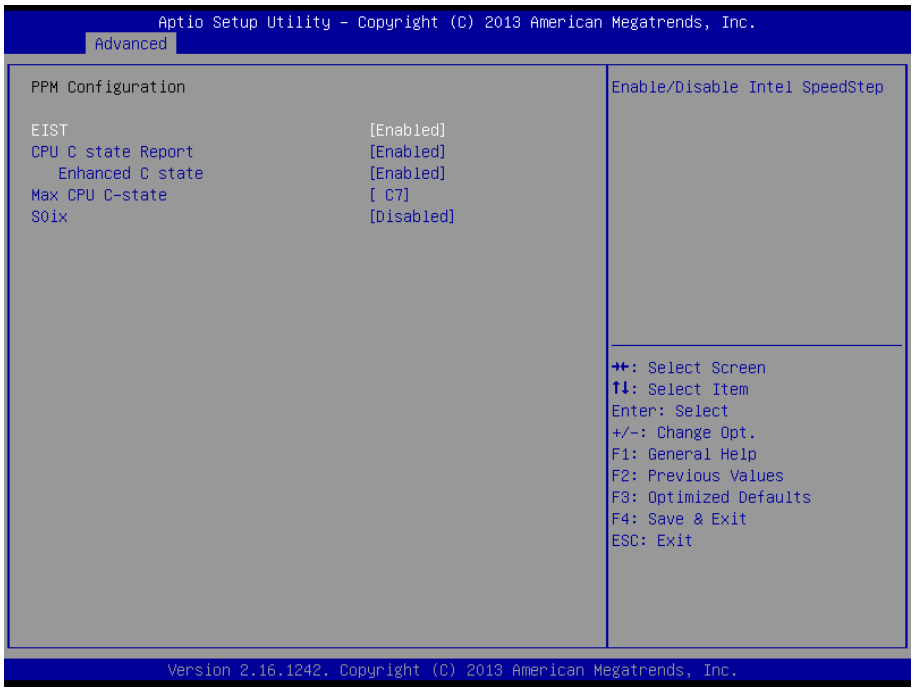
3. IDE / SATA Configuration



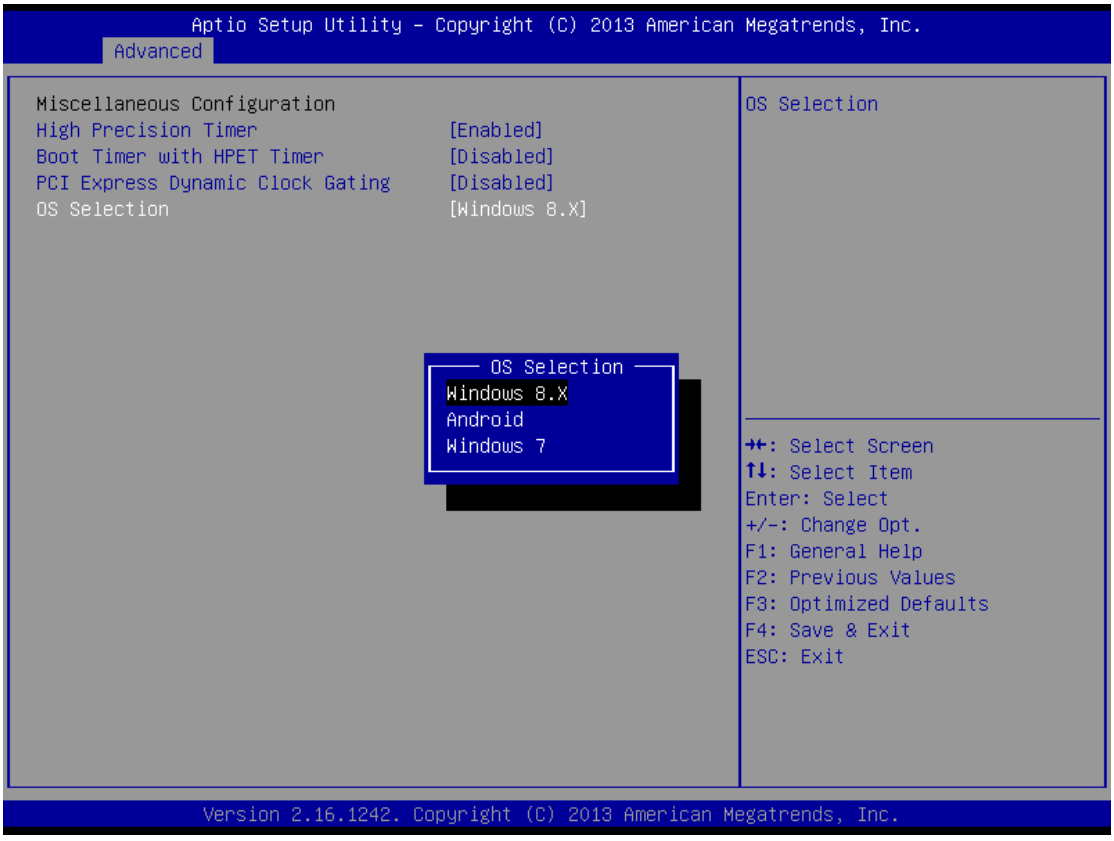
4. USB Configuration


Aptio Setup Utility – Copyright (C) 2013 American Megatrends, Inc.
Advanced
USB Configuration
USB Module Version 8.10.27
USB Devices:
1 Drive, 1 Keyboard, 1 Mouse, 6 Hubs, 1 SmartCard Reader
Legacy USB Support [Enabled]
USB3.0 Support [Enabled]
XHCI Hand-off [Enabled]
EHCI Hand-off [Disabled]
USB Mass Storage Driver Support [Enabled]
USB hardware delays and time-outs:
USB transfer time-out [20 sec]
Device reset time-out [20 sec]
Device power-up delay [Auto]
Mass Storage Devices:
JetFlashTranscend 16GB 1.00 [Auto]
Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.

5. PPM Configuration

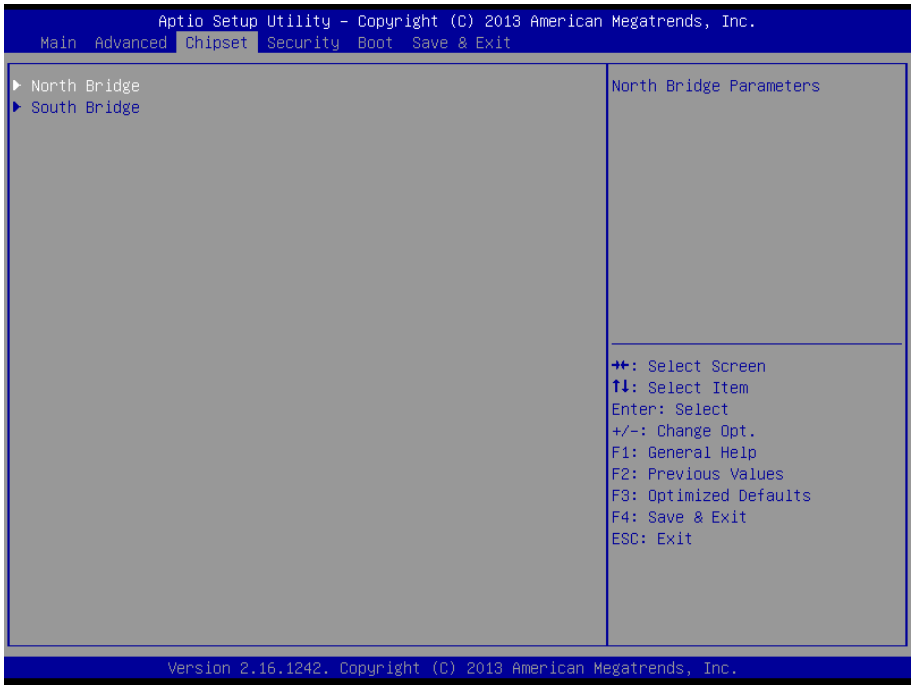


6. OS Selection



9.2.3 Chipset Menu

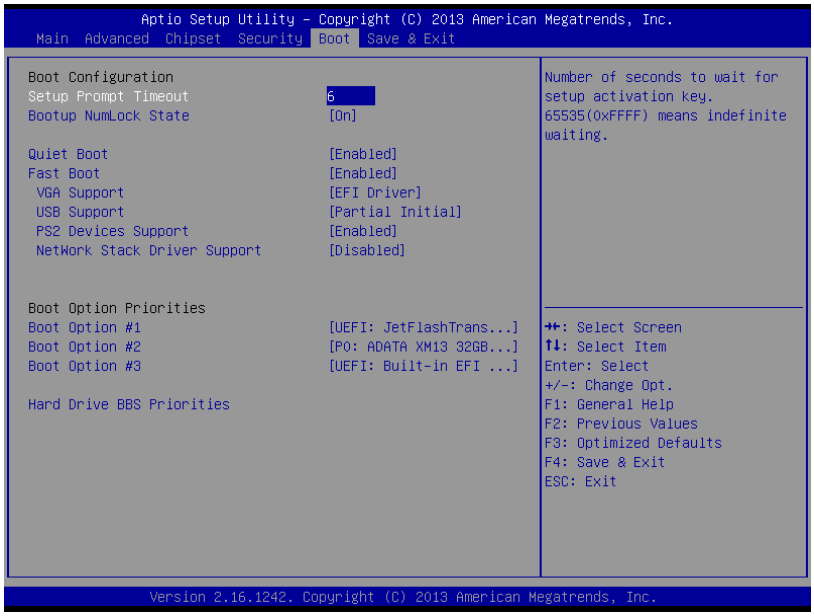
The Chipset menu contains the information of North Bridge and South Bridge.



9.2.4 Boot Menu

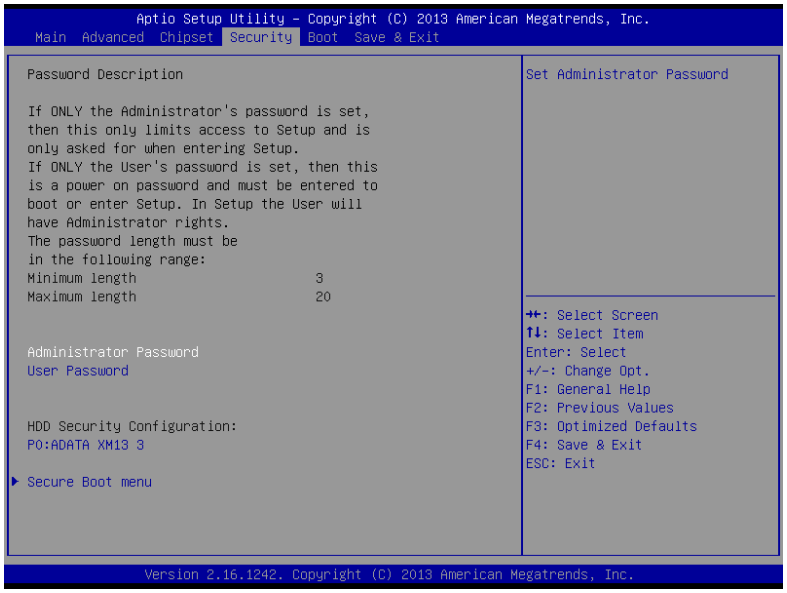
The Boot menu sets the sequence of the devices to be searched for the operating system.

The bootable devices will be automatically detected during POST and shown here, allowing you to set the sequence that the BIOS uses to look for a boot device from which to load the operating system. A brief description of button usage is listed next:


Aptio Setup Utility – Copyright (C) 2013 American Megatrends, Inc.
Main Advanced Chipset Security Boot Save & Exit
Boot Configuration
Setup Prompt Timeout 6
Bootup NumLock State [On]
Quiet Boot [Enabled]
Fast Boot [Enabled]
VGA Support [EFI Driver]
USB Support [Partial Initial]
PS2 Devices Support [Enabled]
NetWork Stack Driver Support [Disabled]
Boot Option Priorities
Boot Option #1 [UEFI: JetFlashTrans...]
Boot Option #2 [P0: ADATA XM13 32GB...]
Boot Option #3 [UEFI: Built-in EFI ...]
Hard Drive BBS Priorities
Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.

9.2.5 Security Menu

In the Security menu, users can set Administrator Password, User Password, and HDD Security Configuration.


Aptio Setup Utility – Copyright (C) 2013 American Megatrends, Inc.
Main Advanced Chipset Security Boot Save & Exit
Password Description
If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup.
If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup the User will have Administrator rights.
The password length must be in the following range:
Minimum length 3
Maximum length 20
Administrator Password
User Password
HDD Security Configuration:
P0:ADATA XM13 3
Secure Boot menu
Set Administrator Password
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.

9.2.6 Save & Exit Menu

The Exit menu displays ways of exiting BIOS Setup utility. After finishing with your settings, you must save and exit so that the changes can take effect.

Save Canges and Exit saves the changes you have made and exits BIOS Setup utility.

Discarding Changes and Exit exits BIOS Setup utility without saving the changes you have made.

Save Canges and Rest saves the changes you have made and resets BIOS system.

Discarding Changes and Reset resets BIOS system without saving the changes you have made.

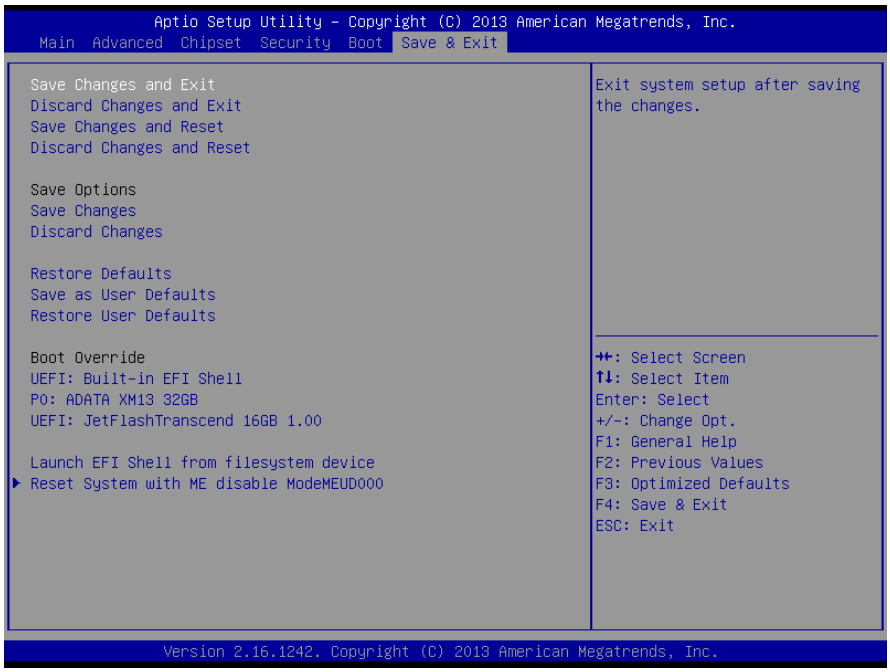
Save Changes done so far to any of the setup options.

Discard Changes done so far to any of the setup options.

Restore Defaults loads/restore the factory default values for all the items.

Save as User Defaults saves the changes one so far as User Defaults.

Restore User Defaults loads/restore the User default values for all the items.


Aptio Setup Utility – Copyright (C) 2013 American Megatrends, Inc.
Main Advanced Chipset Security Boot Save & Exit
Save Changes and Exit
Discard Changes and Exit
Save Changes and Reset
Discard Changes and Reset
Save Options
Save Changes
Discard Changes
Restore Defaults
Save as User Defaults
Restore User Defaults
Boot Override
UEFI: Built-in EFI Shell
P0: ADATA XM13 32GB
UEFI: JetFlashTranscend 16GB 1.00
Launch EFI Shell from filesystem device
Reset System with ME disable ModeMEUD000
Exit system setup after saving the changes.
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.

9.3 Using Recovery Wizard to Restore Computer

Bay Trail Intel® Celeron N2930 series computer has a dedicate recovery partition stored on the hard drive of the PC to enable quick one-key recovery process. This partition occupies about 11GB of the storage space, and comes built-in to each IB70 series PC.

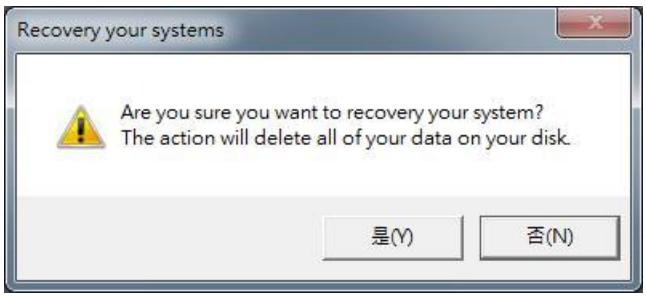
Warning: Before starting the recovery process, be sure to backup all user data, as all data will be lost after the recovery process.

Follow the procedure below to enable quick one-key recovery procedure:

- Plug-in the AC adapter to Bay Trail series computer. Make sure the computer stays plugged in to power source during the recovery process.
- Turn on the computer, and when the boot screen shows up, press the **F6** to initiate the Recovery Wizard.
- The following screen shows the Recovery Wizard. Click on “Recovery” button to continue.

Recovery Wizard
Click " Recovery " to restore your system.
WARNING!
The process will clear all of your data.
If you do not want to restore your system please press " Quit " to reboot.
Recovery
Quit

A warning message about data loss will show up. Make sure data is backed up before recovery, and click on “Yes” to continue.


Recovery your systems
Are you sure you want to recovery your system?
The action will delete all of your data on your disk.
是(Y)
否(N)

Wait till the recovery process to complete. During the recovery process, a command prompt will show up to indicate the percent of recovery process. After recovery is completed, and the tablet computer will restart automatically.

Recovery Wizard
X:\windows\System32\cmd.exe
DiskPart succeeded in cleaning the disk.
DiskPart successfully converted the selected disk to GPT format.
DiskPart succeeded in creating the specified partition.
100 percent completed
DiskPart successfully formatted the volume.
DiskPart successfully assigned the drive letter or mount point.
DiskPart succeeded in creating the specified partition.
DiskPart succeeded in creating the specified partition.
100 percent completed
DiskPart successfully formatted the volume.
DiskPart successfully assigned the drive letter or mount point.
DiskPart succeeded in creating the specified partition.
0 percent completed
Version 2014.02

Service / Update

Official Website

The relevant information about IB70 including the latest news and downloads will be presented in the website below:
http://www.winmate.com.tw/BoxPc/EmbeddedSpec.asp?Prod=05_0156
Please go there to obtain further details of IB70 Motherboard.

Company Information

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CHAPTER 10

Appendix

This chapter includes appendix items for this user manual

Chapter 10: Appendix

10.1 Note1: Digital I/O Sample Code

To find the Digital I/O Sample code, please refer to the IB70 driver CD SDK or contact us.

10.2 Note2: Watchdog Sample Code

To find the Watchdog Sample code, please refer to the IB70 driver CD SDK or contact us.